2013-2014 Energy Efficiency Programs
Statewide Agricultural Energy Efficiency Program
Program Implementation Plan

1. **Program Name:** Statewide Agricultural Energy Efficiency Program
   Program ID: SCG3717 – SW-AG-Energy Advisor
   SCG3718 – SW-AG-CEI
   SCG3719 – SW-AG-Calculated Incentives
   SCG3720 – SW-AG–Deemed Incentives
   Program Type: Statewide Core Program

2. Projected Program Budget Table

Table 1: Total Projected Program Budget by Category

Program #	Main/Sub Program Name	Administrative Amount	Marketing Amount	Direct Implementation Amount	Incentive Amount	Total Program Budget Amount
	SW Agricultural Energy Efficency Program					
3717	SW-AG-Energy Advisor	$6,779	$0	$71,234	$0	$78,013
3718	SW-AG-CEI	$3,453	$0	$60,768	$0	$64,221
3719	SW-AG-Calculated Incentives	$408,836	$212,410	$1,809,414	$1,114,573	$3,545,233
3720	SW-AG-Deemed Incentives	$143,746	$113,006	$481,041	$329,373	$1,067,167
	TOTAL:	**$562,814**	**$325,416**	**$2,422,457**	**$1,443,946**	**$4,754,633**

3. Projected Program Gross Impacts Table

Table 2: Total Projected Program Savings by Subprogram

Program #	Main/Sub Program Name	2013-2014 Gross kW Savings	2013-2014 Gross kWh Savings	2013-2014 Gross Therm Savings
	SW Agricultural Energy Efficiency Program			
3717	SW-AG-Energy Advisor	0	0	0
3718	SW-AG-CEI	0	0	0
3719	SW-AG-Calculated Incentives	0	0	1,496,799
3720	SW-AG-Deemed Incentives	0	0	924,465
	TOTAL:	**0**	**0**	**2,421,264**

4. Program Description

a) <u>Describe program</u>

The Statewide Agricultural Energy Efficiency Program facilitates the delivery of integrated energy management solutions–including energy efficiency, demand response, and distributed generation–to California's agricultural customers. The Program offers a suite of products and services (for example, through strategic energy planning support, technical support services, facility audits, pump tests, calculation/design assistance, financing options, and financial support through rebates and incentives). In addition, the program adopts and supports the strategies and actions of the Agricultural and Industrial chapters of the California Long-Term Energy Efficiency Strategic Plan (Strategic Plan).

The Statewide Agricultural Energy Efficiency Program targets end-users such as irrigated Agricultural growers (crops, fruits, vegetable, and nuts), greenhouses, post-harvest processors (ginners, nut hullers, and associated refrigerated warehouses), and dairies. Traditionally food processors, due to NAICS designation, have received IOU services

through the Industrial program offering. However, there are those facilities with on-site processing that are integrated with a growers and their products, as is the case with some fruit and vegetable processors (canners, dryers, and freezers), prepared food manufacturers, wineries, and water distribution customers that may be addressed by this program's offerings.

To address the potential in these markets, the Statewide Agricultural Energy Efficiency Program offers four sub-programs. A brief description is provided below. For a detailed accounting of the sub-programs' activity refer to the sub-program's specific program implementation plan:

1. **Agricultural Energy Advisor** provides online and onsite audits, including benchmarking (offices and other "commercial" building areas), focused and integrated comprehensive energy audits, pump tests and may include Continuous Energy Improvement (CEI) audits/services across the agricultural segment depending on the IOU's market segment potentials and available resources. The Program provides an inventory of technical project opportunities and financial analysis information for a customer's short- or long-term energy plan, and overcomes both informational and technical customer barriers.

2. **Agricultural Calculated Energy Efficiency Program** offers customers a standardized incentive approach for customized and integrated energy efficiency, and CEI projects, which may include comprehensive technical and design assistance. It overcomes information, technical, and financial barriers across the agricultural segment As a more customized calculation method that can consider system and resource interactions, it will also be the preferred approach for supporting the integrated, whole system, and multi-resource management strategies of the Strategic Plan.

3. **Agricultural Deemed Energy Efficiency Program** provides IOU representatives, equipment vendors, and customers with an easy-to-use mechanism to cost- effectively subsidize and encourage adoption of mass market efficiency measures through fixed incentive amounts per unit.

4. **Agricultural Continuous Energy Improvement (CEI)** is a non-resource sub-program that includes a collection of strategic planning tools and resources for long-term integrated energy planning. CEI serves as a launching platform for other IOU and non-IOU programs and services. CEI offers analysis, benchmarking, long-term goal setting, project implementation support, performance monitoring, and potential energy management certification offered through evolving Department of Energy (DOE) and International Organization for Standardization (ISO) efforts. CEI aims to transform the market from a "project-to-project" approach toward a continuous improvement pathway. In support of the Strategic Plan, the CEI approach also sets the stage for non-energy resource integration, such as greenhouse gas (GHG) reduction, water conservation

strategies, and regulatory compliance. CEI will be offered by the IOUs, based on their market segment potential and resource availability. CEI services will be offered in the Agricultural Energy Advisor sub-program as applicable.

The New Construction Whole Building Approach (WBA) will be extended to existing buildings as one example of the customized bundling outlined in the Strategic Plan. This approach will make available the tools and resources necessary for customers to adopt a comprehensive approach to energy efficiency. This approach may include the deployment of energy management and information systems in demonstration projects that can be used to quantify and analyze energy savings based on various forms of data, including interval meter data.

In addition to these four sub-programs, each of the four investor-owned utilities (IOUs) in the state also offers local programs that complement and enhance the core offerings in their region. The IOU local portfolio mix is designed to enhance energy efficiency and DSM opportunities for Agricultural customers. Additional information regarding the local efforts can be found in the sub-program descriptions and in section 6.g of this program implementation plan. The portfolio mix includes water conservation education information.

Market Characterization

California's agricultural customer base consists primarily of a broad mix of smaller accounts and consumes approximately 7%[1] of total statewide electricity. The business models and energy efficiency needs for these market segments vary widely and thus require targeted marketing and program delivery strategies. A review of the primary segments addressed by this Program is included below.

Irrigated Agriculture

Irrigated agriculture represents an estimated 80% of the total electricity and 73% of total natural gas used by the agricultural segment. This energy is predominately used to lift, move, and pressurize irrigation water. Increased reliance on ground water is increasing energy intensity, giving high priority to improving the current average pumping efficiency from 53% towards the technical potential for 68-70% through optimizing pump operation. Increasing pressures from international competition, land and water use policy decisions, labor force uncertainties, and consolidation of smaller family farms into larger agribusiness enterprises make this segment increasingly receptive to new technologies and practices balanced by financial concerns from risks of crop failure.

Greenhouses

This specialty segment is in transition from the cut flowers industry to ornamental plants and vegetable transplants. Increased mechanization and consolidation in this segment presents opportunities for energy efficiency. Top opportunities for energy savings are in

[1] 1980-2005 California Electricity Consumption by Sector - California Energy Commission, http://www.energy.ca.gov/electricity/consumption_by_sector.html.

boiler improvements, building envelope improvements, and temperature control enhancements (for example, heat curtains).

Post-Harvest Processing Facilities

Post-harvest facilities associated with or near agricultural growing facilities, process, package and store agricultural commodities, such as cotton ginners, nut harvesters and bag-houses, and fruit and vegetable packing plants. Their operations are typically seasonal and driven by harvest schedules. Nut hullers are a growing market due to new more productive strains of almonds. Key technical opportunities in this segment include industrial refrigeration improvements and process improvements.

Dairies and Confined Animal Feeding Operations

California's more than 1,900 dairies are primarily located in Tulare, Fresno, Kern, Merced, Stanislaus, and San Joaquin counties. Dairy farms are consolidating, with larger farms facing increased regulatory challenges related to air and water quality, creating opportunities for the adoption of new technologies and practices. Energy efficiency opportunities are focused in refrigeration, ventilation, and waste handling. Benchmarking will be developed as a key foundational activity to drive customer awareness and continuous energy improvement. Improved dairy waste management offers significant potential for distributed generation, as well as potential reduction of air and water quality problems and the capture and sale of greenhouse gas credits. Like dairies, feedlots and poultry operations for meat and egg production have drawn recent food safety and regulatory attention that may make them more receptive to new technologies and practices for improved efficiencies and waste to energy opportunities. Animal waste streams within this segment offer biogas development potential.

Food Processing, General

Off site Food Processing may include breweries, meat and poultry processing, dairy processors (e.g., creameries), canned, dried or frozen fruits and vegetables, grain products, baked goods, sugar and confectionary products, oils, snack manufacturing, soft drink manufacturers and seafood processing. The market is characterized by a small number of large users representing a disproportionate percentage of the energy consumed, offering an ideal opportunity for delivering a large customer strategy. The segment has high energy-intensity in relation to profit margins and is highly seasonal, with the majority of natural gas and over half of the electricity used during the peak summer season. Increased global competition and environmental regulations like AB 32 position this market for reductions in energy, water, emissions, greenhouse gasses and raw materials. An integrated resource management strategy, focusing on long-term continuous improvements, is expected to improve energy efficiency performance in the segment. The majority of the energy savings potential comes from process system improvements such as in refrigeration, boilers and steam systems, compressed air and motors. Distributed generation and demand response opportunities include using waste heat/steam for production processes such as pasteurization, cooking and heating.

Food Processing, Wineries

California's more than 2000 wineries produce 90% of all US wine. The segment is comprised of a small number of very large wineries and conglomerates, and a large number of small and medium facilities. This environmentally progressive segment of tightly knit and organized peer-to-peer networks has established environmental programs and web-based environmental benchmarking tools, and has launched a winery carbon calculator to support energy efficiency. The wine segment offers a model for other agricultural segments to follow. These efforts have been led by the California Sustainable Winegrowing Alliance (CSWA), which is eager to continue working with interested IOUs on outreach, education, training, and benchmarking. These efforts will promote best practices in resource management including energy, water, air and GHGs. Energy savings potential is predominantly in refrigeration, pumping, and water heating and treatment. The wine segment's demand peaks in summer and fall, related to refrigeration during crush, making refrigeration improvements especially attractive. Interest in emerging technologies has been strong.

Food Processing, Refrigerated Warehouses

Off-site refrigerated warehouses are highly specialized, energy-intensive, technology-oriented facilities focused on staying competitive with operators in nearby markets. They are comprised of, or associated with, wholesale facilities, public and private refrigerated warehouses, food and beverage processors, and perishable product cooling and packaging operations. As they handle a wide variety of seasonal products, loads can vary dramatically between facilities. Significant energy savings opportunities exist in facility retrofits and improved new facility design, as captured in the Agricultural Strategic Plan. Activities identified in the Agricultural Strategic Plan include expanded education and training and best practices dissemination directed at facilities designers and operators, the refinement of the DOE-2.2R energy modeling tool utilizing national funding and support, and incorporating codes and standards. The ability to float refrigeration loads through peak periods with controls software has shown great initial success in the 2006-2008 program cycle for demand response.

Water Irrigation Districts and Agencies

The water and wastewater industry (North American Industry Classification System prefix 221) collects surface water or groundwater, treats water to agricultural or potable standards, transports water to local distribution networks, delivers water to end users, and finally, collects and treats wastewater for discharge into the environment. IOU customers in this sector include large public agencies and private water supply utilities, can include wastewater treatment districts, and integrated water and wastewater utilities. IOUs may address the last two sub-segments in Commercial or Industrial segments. Irrigation and power districts located in California's Central Valley are also large users of electricity and natural gas.

b) <u>List measures</u>

Technologies addressed through this program effort include pumping, refrigeration, process loads, process heating, lighting, and plug loads. Incentive levels will be offered through the Agricultural Calculated Energy Efficiency Program and the Agricultural

Deemed Energy Efficiency Program, described in full in their respective Program Implementation Plans.

c) <u>List of non-incentive Agricultural Energy Advisor Services</u>

The Statewide Agricultural Energy Efficiency Program includes a wide variety of non-incentive program services. These services are intended to support customer strategic planning, educate and train customers and the workforce about energy efficiency, and provide customized technical and project support. The service list may include and is not limited to:

- Energy Audits
  - Remote energy audits;
  - Integrated energy audits;
  - Benchmarking (currently limited to portions of an agricultural facility with commercial spaces);
  - Pump tests and pumping systems technical support; and
  - Water leak detection services (new service).
- Continuous Energy Improvement (CEI)
  - Energy management assessments;
  - Energy planning;
  - Baselining and benchmarking;
  - Project implementation support; and
  - Customer recognition.
- Customer Education and Training
  - DOE basic, intermediate and specialist training on agricultural and industrial pumps, motors, compressed air, and steam;
  - Other industrial process systems training;
  - Agricultural pumping efficiency seminars;
  - Workshops merging regulatory compliance with energy efficiency opportunities (such as with NOX compliance and boiler retrofits); and
  - Integrated industry-focused workshops, such as for wineries, dairies, greenhouses, and food processors.
- Workforce Education and Training
  - The Statewide WE&T crosscutting program effort will be leveraged to deliver targeted training to the agricultural sector to support Superior Energy Performance (SEP), ANSI and ISO energy management certification;
  - Title 24 training, such as for refrigerated warehouses; and
  - Industrial refrigeration best practices (for designers), in support of the Strategic Plan focus on refrigeration.

5. Program Rationale and Expected Outcome

a) <u>Quantitative Baseline and Market Transformation Information</u>

Market transformation is embraced as an ideal end state resulting from the collective efforts of the energy efficiency field, but differing understandings of both the MT process

and the successful end state have not yet converged. The CPUC defines the end state of MT as "Long-lasting sustainable changes in the structure or functioning of a market achieved by reducing barriers to the adoption of energy efficiency measures to the point where further publicly-funded intervention is no longer appropriate in that specific market."[2] The Strategic Plan recognizes that process of transformation is harder to define than its end state, and that new programs are needed to support the continuous transformation of markets around successive generations of new technologies[3].

Market transformation programs differ from resource acquisition programs on 1) objectives, 2) geographical, 3) temporal dimensions, 4) baselines, 5) performance metrics, 6) program delivery mechanisms, 7) target populations, 8) attribution of causal relationships, and 9) market structures[4]. Markets are social institutions[5], and transformation requires the coordinated effort of many stakeholders at the national level, directed to not immediate energy savings but rather to intermediary steps such as changing behavior, attitudes, and market supply chains[6] as well as changes to codes and standards. Resource acquisition programs rely upon the use of financial incentives, but concerns have been raised that these incentives distort true market price signals and may directly counter market transformation progress[7]. According to York[8], "Market transformation is not likely to be achieved without significant, permanent increases in energy prices. From an economic perspective, there are 3 ways to achieve market transformation: (1) fundamental changes in behavior, (2) provide proper price signals, and (3) permanent subsidy."

Market transformation draws heavily upon diffusion of innovation theory[9], with the state of a market usually characterized by adoption rate plotted against time on the well-known S-shaped diffusion curve. In practice, however, the diffusion curve of products may span decades[10]. Market share tracking studies conducted 3, 5 or even 10 years after the start of an MT program may reveal only small market transformation effects[11]. The ability to make causal connections between these market transformation effects and any particular

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[2] California Public Utilities Commission Decision, D.98-04-063, Appendix A.
[3] California Public Utilities Commission (2008) *California Long Term Energy Efficiency Strategic Plan*, p. 5. Available at http://www.californiaenergyefficiency.com/docs/EEStrategicPlan.pdf.
[4] Peloza, J., and York, D. (1999). "Market Transformation: A Guide for Program Developers." Energy Center of Wisconsin. Available at: http://www.ecw.org/ecwresults/189-1.pdf.
[5] Blumstein, C., Goldstone, S., & Lutzenhiser, L. (2001) "From technology transfer to market transformation". Proceedings of the European Council for an Energy Efficient Economy Summer Study. Available at http://www.eceee.org/conference_proceedings/eceee/2001/Panel_2/p2_7/Paper/.
[6] Sebold, F. D., Fields, A., Skumatz, L., Feldman, S., Goldberg, M., Keating, K., Peters, J. (2001) *A Framework for Planning and Assessing Publicly Funded Energy Efficiency*. p. 6-4. Available at www.calmac.org.
[7] Gibbs, M., and Townsend, J. (2000). The Role of Rebates in Market Transformation: Friend or Foe. In *Proceedings from 2000 Summer Study on Energy Efficiency in Buildings.*
[8] York, D., (1999). "A Discussion and Critique of Market Transformation", Energy Center of Wisconsin. Available at http://www.ecw.org/ecwresults/186-1.pdf.
[9] Rogers (1995) Diffusion of Innovations, 5th Ed.
[10] Example in bottom chart of this graphic from the New York Times: http://www.nytimes.com/imagepages/2008/02/10/opinion/10op.graphic.ready.html.
[11] Sebold et al (2001) p. 6-5.

program's activities fades with time, as markets continually change and other influences come into play.

These challenges mentioned above are in reference to programs that were specifically designed to achieve market transformation; and these challenges are only compounded for programs that were primarily designed to achieve energy and demand savings. However, since the inception of market transformation programs almost two decades ago, many lessons have been learned about what the characteristics of successful MT programs are.

First and foremost, they need to be designed specifically to address market transformation. "The main reason that (most) programs do not accomplish lasting market effects is because they are not designed specifically to address this goal (often because of regulatory policy directions given to program designers.)"[12] The Strategic Plan recognizes that regulatory policies are not yet in place to support the success of market transformation efforts[13], but also reflects the CPUC's directive to design energy efficiency programs that can lay the groundwork for either market transformation success or for codes and standards changes.

Above all else, the hallmark of a successful market transformation program is in the coordination of efforts across many stakeholders. The most successful MT programs have involved multiple organizations, providing overlapping market interventions[14]. The Strategic Plan calls for coordination and collaboration throughout, and in that spirit the IOUs look forward to working with the CPUC and all stakeholders to help achieve market transformation while meeting all the immediate energy, demand, and environmental needs. Drawing upon lessons learned from past MT efforts, the Energy Center of Wisconsin's guide for MT program developers[15] suggests that the first step is not to set end-point definitions, progress metrics or goals. Rather, the first steps include forming a collaborative of key participants. As the Strategic Plan suggests, these may include municipal utilities, local governments, industry and business leaders, and consumers. Then, with the collective expertise of the collaborative, we can define markets, characterize markets, measure baselines with better access to historical data, and define objectives, design strategies and tactics, implement and then evaluate programs. The collaborative will also provide insights that will set our collective expectations for the size of market effects we can expect, relative to the amount of resources we can devote to MT. No one organization in the collaborative will have all the requisite information and expertise for this huge effort. This truly needs to be a collaborative approach from the start.

[12] Peters, J.S., Mast, B., Ignelzi, P., Megdal, L.M. (1998). *Market Effects Summary Study Final Report: Volume 1."* Available at http://calmac.org/publications/19981215CAD0001ME.PDF.
[13] CPUC (2008) Strategic Plan, p. 5.
[14] Nadel, Thorne, Saches, Prindle & Elliot (2003).
[15] Peloza & York, (1999).

Attitudinal change is an important part of any market transformation effort. This change may be tracked with a battery of questions that probes customer attitudes, knowledge and awareness (AKA) of energy efficiency. In order to gauge an attitudinal based metric for this sector a battery of questions probing AKA among customers would have to be created and used to scale AKA. Examples of AKA would include knowledge of energy efficiency lighting and other specific measures. Evaluators could also draw from customer surveys used in past program evaluation studies to determine whether any response patterns would be a useful indicator of market transformation, moving forward. The dimensions of any scale need to be selected by the MT collaborative. The baseline response pattern to the AKA scale would need to be established early during the program cycle. Customers could be surveyed on an annual basis and changes in their AKA tracked along the scale. Responses of customers for a particular sub-program could be pulled out for separate analysis, as needed.

In addition, behavioral change is an important part of any market transformation effort. This change may be tracked with a battery of questions that probes customer past behavior and intentions about energy efficiency. In order to gauge a behavioral- based metric for this sector, a battery of questions about energy efficient behaviors could be used to create a scale of Energy Behavior. Evaluators could also draw questions about specific behaviors from customer surveys used in past program evaluation studies, to determine whether any response patterns would be a useful indicator of market transformation, moving forward. The dimensions of any scale need to be selected by the MT collaborative. The behaviors that could be probed include maintenance behaviors to keep EE measures operating correctly, and behaviors that maximize energy efficiency of existing equipment. Customers could be surveyed early in the program cycle and their responses on the scale could serve as the baseline for subsequent behavioral change. Customers could be probed annually and their Energy Behavior change measured along the scale. Responses of customers for a particular sub-program could be pulled out for separate analysis, as needed.
Therefore, for the Agricultural sector, the following approach to quantitative baseline and market transformation information is as follows:

Program Performance Metrics (PPMs)

The IOUs have evaluated 2010-2012 PPMs in Resolution E-4385 for applicability to the 2013-2014 program cycle and propose to work collaboratively with Energy Division to develop revised program targets and PPMs as appropriate for the 2013-2014 program cycle. The IOUs' will propose revisions in an advice letter, per additional guidance from Energy Division.

Table 3.1: Short-Term PPMs

On December 2, 2010, the Commission issued Resolution E-4385, approving Program Performance Metrics (PPMs) for Pacific Gas and Electric Company, Southern California Edison Company, Southern California Gas Company and San Diego Gas and Electric Company for 2010-2012 statewide energy efficiency programs and sub-programs. The Commission gave each PPM a metric type which indicated the reporting frequency:

Metric type 2a indicates that the IOUs should report on the metric on an annual basis (unless indicated otherwise). Metric type 2b indicates the IOUs should report on the metric at the end of the program cycle.

Below are the approved PPMs and metric types for the Statewide Agricultural Energy Efficiency Program (Resolution E-4385, Appendix A, pp. 32-34).

SW PROGRAM / *Sub-Program*	**PROGRAM PERFORMANCE METRIC (PPM)**	**Metric Type**
COMMERCIAL / INDUSTRIAL / AGRICULTURAL COMBINED ***** Data to be reported in disaggregate form by SW program (commercial, industrial, and agricultural)		
	*1. Number and percent (relative to all eligible customers) of commercial, industrial and agricultural customers participating in sub-programs (NRA, Deemed, Calculated, and CEI) by NAICS code, by size (+/- 200 kW per yr or +/- 50K therms per yr), and by Hard to Reach (HTR)** ** "HTR" is as defined in the EE Policy Manual	2a
Continuous Energy Improvement (CEI)	*1. Number and percent of commercial, industrial, and agricultural CEI participants that meet short-term (2010-2012) milestones as identified by their long term energy plans.	2a
	*2. Lessons learned, best practices, and plan to ramp up the CEI program are developed. (Y/N)	2b
	*3. Number and percent of commercial, industrial and agricultural customers that created an energy plan via CEI will be tracked by program.	2a
Energy Advisor (EA)	*1. Number and percent of commercial, industrial, and agricultural customers receiving non-residential audits by NAICS and SIC code.	2b
	*2. For commercial, industrial, and agricultural customers who received audits, the number and percent of adopted audit-recommended technologies, processes and practices. (Report disaggregated data by type of audit – Basic and Integrated,) **(1) **Data sources for reporting will come from (a) program tracking databases and (b) process evaluation to refine estimates. (1) – An audit completed in one portfolio may have measures implemented over several years and portfolios.	2b
Deemed Incentives	*1. Number and percent of new, improved, or ETP measures** installed in the commercial, industrial and agricultural programs. ** "ETP measure" defined as ET measures first introduced into the EE portfolio since January 1, 2006.	2a

Calculated Incentives	*1. Number and percent of new, improved, or ETP measures installed in completed calculated projects. *2. Number, percent, and ex-ante savings from commercial, industrial and agricultural sector of projects with ETP measures**included. (Report disaggregated savings by measure and number of installations by measure.) ** "ETP measure" defined as ET measures first introduced into the EE portfolio since January 1, 2006.	2a 2b
AGRICULTURAL		
	1. Number and percent of first-time** participants in energy efficiency programs. (Report disaggregate data by sub-program.) **"First time" means customer has not participated in energy efficiency programs since December 31, 2005.	2b
Pump and Test Repair	1. Percent of agricultural pump tests that lead to a repair or replacement.	2b

Table 3.2 Long Term PPMs

SoCalGas includes long term PPMs[16] per Energy Division guidance received in December 2012. As stated in the Joint Utilities' comments to the Commission in R. 09-11-014 dated November 21, 2011, and discussed between IOUs and ED on January 9, 2013, IOUs plan to finalize long term PPMs in further discussions with involved stakeholders and propose updates to Energy Division at a later date.

MTI Index#	RE-CATEGORIZED Metric (LTPPM - or SPI) [E-4385 Appendix B original text except for noted edits]	Unresolved Issues
CIA-1	MT Indicator 1: Number and percent of Calculated Incentive participants who go on to implement a long-term energy plan under the Continuous Energy Improvement program.	
CIA-3	MT Indicator 3: Number and percent of CEI Participants who achieve all scheduled milestones, as identified in their long-term energy plans.	
CIA-4b	MT Indicator 4b: Number and percent of CEI Participants that include greenhouse gas reduction measurement, monitoring and reduction strategies in their long-term energy plans.	
CIA-5	MT Indicator 5: Number and percentage of eligible customers participating in the CEI Program	
CIA-6	MT Indicator 1: Percent of NRA participants that implement non-incented measures recommended in the audit.	

[16] From the Energy Division's file "Revised MTIs_10 27 11-formal-release-ED-May-2012.xlsx"

CIA-16	MT Indicator 2: Percentage of commercial participants, tracked by NRA, Calculated and Deemed subprogram, who go on to implement a long-term energy plan.	Need to define "long term energy plan"; start with CEI program definitions.
Ag-2	MT Indicator 1: Percent of Ag customers renovating and/or maintaining their pump after receiving a pump test that shows OPE is above the baseline OPE level determined through the Market Characterization Study.	

b) Market Transformation Indicators (MTIs)

Per Resolution E-4385, a subset of market transformation indicators (MTIs) for statewide energy efficiency programs and subprograms were presented at a public workshop on November 7, 2011, to allow for public comments and discussion before being finalized. Per guidance from Energy Division received in December 2012, the approved Market Transformation Indicators for 2013-2014 are filed as a Joint IOU matrix, included as Appendix F.

c) Program Design to Overcome Barriers

The Statewide Agricultural Energy Efficiency Program builds on past program successes and best practices to overcome both market wide and segment specific barriers to efficiency, including:

- Market-wide barriers:
  - Agriculture is a diverse and geographically widespread sector, dependent on regional resources for information, and traditionally needs significant experiences to warrant changing practices that has served them well for years.
  - Capital constraints, combined with variable commodity pricing, limit the availability of funds for investing in projects.
  - The Statewide Finance PIP includes plans to explore and develop additional finance tools to facilitate the adoption of integrated projects.
  - Low energy costs relative to other operating expenses reduces the motivation to invest in energy efficiency.
  - Lack of awareness of the benefits of energy efficiency, and uncertainty and skepticism over long-term energy and cost savings hinder investment.
  - As in many industries, cyclical budgeting processes makes it difficult for customers to commit to a plan of action if their decision making occurs out of sync with budget planning.
- Food processing and industrial refrigeration barriers:
  - Few firms maintain facility level energy managers, and finding technically qualified staff is an ongoing challenge.
  - Regulatory compliance issues further strain limited internal resources.
  - International competition drives short-term survival attitudes versus a long- term continuous improvement approach.
  - The industrial refrigeration industry lacks design standards and best practices, resulting in substandard design and maintenance.

- Huge capital outlay requirements in industrial refrigeration can delay or offset efficiency projects.
- Efficient design alternatives can be lost in low-cost bidding scenarios.
- Whole system opportunities are missed by individual equipment vendors.
- Customers are often not aware of systems operating sub-optimally.

The Statewide Agricultural Energy Efficiency Program takes these barriers into account with the features described below for continuous improvement, trade ally workforce education and training, and technical support.

Continuous Energy Improvement
The long-term strategic energy planning approach of CEI, especially the emphasis on benchmarking, goal setting, and performance tracking, will help customers overcome short-term attitudes. CEI also fosters integration of non-energy business objectives into energy planning and leveraging of the co-benefits of water conservation, GHG reduction, and other relevant issues. This integration elevates the importance of energy efficiency and improves uptake and market penetration. In addition, top-down corporate attention and tracking of energy performance will positively affect facility staff performance.

Trade Allies/Workforce Education and Training
Customers in the agricultural and food processing markets often treat vendors, designers, and engineers as ad hoc outsourced technical resources. These customers ask for everything from new equipment design to emergency equipment repair or replacement. Because these transactions often happen without IOU knowledge, it becomes critical to continually inform and equip these vendors about efficiency technologies, practices, programs, and rebates. Vendor Participation Agreements, training, and outreach collaboration allow participating vendors to up-sell customers to efficient options and differentiate themselves on energy efficiency. IOUs gain an additional sales force in the field with customers, minimizing lost opportunities.

Technical Support Services
The role of the IOU as an unbiased, trusted energy advisor cannot be overstated, both in evaluating proposed vendor projects and in identifying new technical opportunities in retrofit and new construction projects. The combination of technical support and the availability and commitment of approved IOU incentive funds – based on a rigorous technical review and followed by an EM&V process – are essential drivers to overcome key customer barriers, including the lack of in-house technical resources and the tendency for efficiency options to get eliminated in low-cost vendor bidding scenarios.

Agricultural Energy Advisor (AEA)
AEA is designed to deliver a coordinated and customer-specific audit service. AEA features a statewide integrated demand-side management customer-specific solution that promotes energy efficiency, demand response, distributed generation and emerging technologies, as appropriate, to the customer's need(s).

The AEA is designed to support the goals of the Strategic Plan by providing customers with comprehensive building-specific information on cost-effective DSM opportunities. The IOUs believe this approach is the best way to influence market transformation, serve customers' needs, and increase adoption of DSM solutions.

d) Quantitative Program Targets

Table 5 - Program targets are provided at the sub-program level.

e) Advancing Strategic Plan Goals and Objectives

The teams of statewide agricultural program supported the development of the California Long-Term Energy Efficiency Strategic Plan (Strategic Plan), and the 2013-2014 program design integrates the goals and strategies of the Strategic Plan. Specifically, the following actions will be advanced during the 2013-2014 program cycle.

Goal 1: Establish and maintain a knowledge base sufficient to support development of all available, cost-effective, reliable, and feasible energy efficiency, demand reduction (and renewable) energy resources.

Strategy 1.1: Develop knowledge base of efficiency solutions.

Near term: Conduct an energy use characterization and efficiency potential study for the statewide agricultural market. Include potential for waste streams to offset energy consumption. Study plan (6/2009) and study completed (12/2010).

Near term: Collect data on key programs and measures best practices for energy efficiency in the agricultural sector. Study completed (6/10).

IOUs will continue to coordinate with the California Energy Commission (CEC) and other resources to identify a study plan, scope, and deliverables for a statewide agricultural market characterization that considers integrated energy opportunities in the segment. If possible, the plan will be coordinated with other agricultural characterization plans planned or underway in the state focusing on renewable energy potentials, such as the California Department of Food and Agricultural's strategic plan for agriculture. The IOUs will defer to the Commission and the CEC to determine the best method and timeline for this study, and will ensure coordination between each IOU's EM&V groups towards study objectives.

Such a marketing characterization will support the development of future program baseline data and metrics to help set targets and show market progress. The resulting study will be posted on appropriate websites, including the IOU websites and the statewide websites.

To develop a "one stop shopping" clearinghouse of energy management and related information for the agricultural segment, the IOUs will organize and post all relevant existing technical information on the IOU and statewide websites, as

needed. This information includes best practices, continuous energy improvement resources, emerging technologies data, tools, programs, and other information.

Strategy 1.2: Ensure workforce has information and training necessary to apply efficiency solutions.

Near term: Conduct workforce training needs assessment and next steps (12/2010).

Near term: Develop training curricula and modules identified by needs assessment. (12/2011)

IOUs will assemble technical sub-groups, including IOU and industry experts, to focus on the key technical areas identified in the Strategic Plan, such as pumping, refrigeration and process heating. Coordinating with Statewide WE&T Program, the Statewide Agricultural Energy Efficiency Program will develop a scoping document that outlines training objectives and partners. The group will identify priority topics, resource needs and industry partners for key workforce education and training, and will closely coordinate with the national ANSI Superior Energy Performance standards development work towards workforce certification. Additionally, IOUs will offer prerequisite training to support future Department of Energy certification classes.

Workforce training needs assessment will be included in the agricultural market characterization study, and results communicated to the Statewide WE&T team for coordination and development of a detailed WE&T plan and associated curricula. Furthermore, marketing for WE&T will be incorporated into program specific marketing and outreach efforts. Such efforts, pending timely completion of the characterization study, are targeted for completion by the close of the 2010-2012 program cycle.

Strategy 1.3: Conduct research & development of new technologies and practices for agricultural efficiency.

Near term: Conduct an Energy Technologies/RD&D gap analysis. Identify and prioritize needed RD&D/ET projects. (12/2011).

Near term: Coordinate research activities across government, IOUs, agricultural extension and university programs, and equipment manufacturer proprietary efforts.

The IOU's ET teams will continue to closely coordinate with the CEC, universities and industry associations to identify key potential areas for emerging technologies development and research needs, such as, for agriculture, in irrigation pumping, refrigeration, and process heating applications. IOUs will identify the most promising technologies that can play a role of providing multiple solutions, both for energy efficiency and greenhouse gas mitigation, as well as water efficiency purposes.

Goal 2: California regulations, financing mechanisms, and incentive programs affecting the management of energy, air and water resources, solid waste, and climate change will be coordinated to mutual advantage.

Strategy 2.1: Set objectives and framework for agriculture to attain multi-resource management goals.

Near term: Establish a task force to coordinate resource management policies, action goals, and program designs targeting California's agricultural sector.
Near term: Identify where goal conflicts arise and resolve these conflicts.
Near term: Assess potential for integrated approaches.

In support of statewide regulatory coordination, the IOUs will convene a task force with the California Department of Food and Agriculture (CDFA), CEC, Environmental Protection Agency (EPA), and the California Air Resources Board (CARB). The task force will be empowered to coordinate strategies and goals, and also assess the potential for integrated approaches, on behalf of their agencies. In order to facilitate this complex, multi-agency coordination, intervention at the governor's level is likely to be required.

Strategy 2.2: Coordinate technical assistance, funding, and incentive mechanisms.

Near term: Identify the programs and major funding sources affecting the management of energy, air and water resources, and climate change.
Near term: Create a collaborative forum to facilitate sharing of information and coordination of programs.

As challenges to the national and state economies arise, deploying financial resources in support of energy efficiency and other resource efficiency will be increasingly important. In support of financial coordination, IOUs will work with appropriate agencies, utilities, industry and private banking to assemble a comprehensive list of incentives, resources, funds, grants, loan products, and federal economic stimulus monies. This list will support energy and other resource management objectives, made available to customers through the planned Information Clearinghouse on Energy Design Resources.

In addition, financial resources will be integrated into marketing and outreach, education and training, and other program efforts, as appropriate.

Goal 3: Achieve significant increases in the efficiency of electricity and natural gas use and on-site renewable energy utilization, including setting a specific target for irrigation efficiency.

Strategy 3.1: Make information on efficiency solutions readily available to motivate efficiency improvements.

Near term: Develop benchmarking resources, tools and methods for the agricultural sub-sectors.
Near term: Design and launch focused program for irrigation efficiency, refrigeration, and process heating.

The IOUs will post relevant market data, technical information, education and training resources, and benchmarking tools, other than proprietary material or information, on the planned Energy Design Resources or other statewide clearinghouse websites. This information will cover relevant technologies in agricultural and food processing segments, but will have a focus on irrigation efficiency, refrigeration, and process heating. The Continuous Energy Improvement Program will also support this strategy. On benchmarking and other Energy Advisor Services, the IOUs will leverage specific industry associations (for example, water/waste water, dairy and produce growers) to prioritize benchmarking and energy efficiency needs and to develop tools and effective methodologies

Strategy 3.2: Conduct marketing &outreach to stimulate efficiency actions.
Near term: Develop ME&O strategy, addressing communication channels, partners, and effective messaging.
Near term: Begin pilot implementation.

For details on marketing and outreach planned to stimulate energy efficiency actions, please refer to Section 6.b.iv.

Strategy 3.3: Resolve metrics for embedded energy in water savings.
Near term: Update evaluation measurement & verification protocols to define energy impacts of water efficiency actions.
Near term: Design and conduct appropriate water/energy efficiency pilots for agriculture.

In support of the significant efforts underway in California to conserve water resources and to optimize public funds where energy and water converge, the IOUs will work with the Commission, water resources boards, local water agencies, and others to resolve metrics around embedded energy in water conveyance and treatment. Furthermore, IOUs will explore opportunities for saving energy on-site related to water, such as that in heating, cooling, pumping, and treating water. Lessons learned from current water-energy pilots, underway in one IOU's territory, will be shared with the other IOUs. The IOUs are willing and available to work with the Commission to advance these important multi-resource efforts through studies, pilots and partnerships with water agencies as appropriate.

6. Program Implementation

2013-2014 Energy Efficiency Programs
Statewide Agricultural Energy Efficiency Program
Program Implementation Plan

a) Statewide IOU Coordination

i. Program name: Statewide Agricultural Energy Efficiency Program

ii. Program delivery mechanisms

The SoCalGas Agricultural Energy Efficiency Program will ensure the program is continuously updated and enhanced throughout the two-year implementation cycle. This also includes coordination with crosscutting program elements, including Emerging Technologies, Codes and Standards, Workforce Education and Training, Marketing and Outreach, and Non-IOU programs and market initiatives. Each designated IOU program lead will be responsible for representing key updates from each crosscutting program element in order to discuss opportunities for statewide program enhancements, modifications and further coordination as needed. IOU leads will then be responsible for incorporating program modifications at the IOU level to support statewide consistency when appropriate. Such items will be tracked in the meeting minutes to facilitate a record of statewide initiatives.

In addition, the four agricultural sub-programs will be coordinated statewide to unify program implementation including delivery mechanisms, incentive levels, marketing and outreach plans, and IOU program interactions. The two coordination systems (one for the broad core program and one designed for the five sub-programs) will interact with and support one another. The broad, high-level coordination effort is described below, focusing on how the IOUs will work together to effect the continuous improvement of the Statewide Agricultural Energy Efficiency Program.

The Statewide IOU Coordination process for the SoCalGas Agricultural Energy Efficiency Program will be as follows:

- **Designate an IOU Program Lead** – The coordination process will begin with each IOU designating a Statewide Agricultural Energy Efficiency Program lead. The IOU lead will represent one agricultural sub-program and liaise with the crosscutting program element managers, investigating new innovations, special accomplishments, and challenges experienced by sub-program managers in all IOUs. Where such innovations or challenges may impact the Statewide Agricultural Energy Efficiency Program across multiple sub-programs or the statewide program as a whole, the IOU lead will present such information to a quarterly Steering Committee meeting.
- **Establish protocols for Steering Committee Meetings** – The IOUs will coordinate a statewide committee which will continue its guiding work to establish protocols around scheduling meetings, agenda setting, interstate travel, meeting minutes and tracking of action items identified.
- **Hold Quarterly Steering Committee Meetings** – The Agricultural Steering Committee will be comprised of all designated IOU leads (including at least one lead for each of the five sub-programs), and possibly other contributing stakeholders identified by the IOUs. At the

quarterly Steering Committee meeting, individual innovations, challenges, and accomplishments experienced in one IOU or by one sub-program will be shared with all IOUs. The Steering Committee will evaluate these individual IOU and sub-program experiences, hear ideas for course corrections and overcoming challenges, replicate successful innovations for consistency statewide, resolve differences in implementation to stay unified, and measure the agricultural program's progress against statewide metrics and goals.

- **Adopt Program Enhancements** – After the Steering Committee agrees that a particular implementation policy or innovation has merit on a statewide level, each IOU lead will distribute the information to their sub-program managers for adoption and integration. Therefore, the IOU lead will act as a conduit, feeding sub-program information up to the statewide Steering Committee and distributing measures for adoption back to the sub-program managers. This feedback loop will assure consistency and unity in programmatic improvements across the IOUs. In some cases, it may be necessary to invite the sub-program managers to the Steering Committee meeting to get their feedback and ensure they receive the same message.
- **Evaluate Program Enhancements Against Statewide Targets** – To complete the adaptive management loop, the Steering Committee will track the program's accomplishment of statewide targets and goals to ensure that adopted program enhancements are generating their intended results. The Steering Committee will determine whether further course corrections are needed, and if so, rely on the above coordination process to generate the improvements necessary to stay on track.

The high-level focus of this statewide coordination effort will enable the capture of new innovations and opportunities for program improvement, correct program weaknesses that reveal themselves during implementation, and help ensure achievement of statewide targets across IOU service territories.

iii. Incentive levels

Details on the incentive levels are discussed with each of the four sub-programs.

iv. Marketing and outreach plans, e.g. research, target audience, collateral, delivery mechanisms

The IOUs will continue to develop in-depth segmentation of the agricultural market. The results of this customer segmentation will support the development of targeted integrated marketing and outreach plans outlining multiple delivery channels that target customers, based on their needs and preferences. Such delivery channels will likely include increased customer outreach through trade and community-based associations, third parties, government partnerships and core IOU programs. More specific marketing information is provided in each of the agricultural sub-program plans.

To specifically address this highly diverse and dispersed group of agriculture, food processing and related water customers, IOUs will continue to foster strategic partnerships with industry and commodity groups, as well as with regional farm and food associations. These partnerships engage in a multi-faceted approach to marketing energy efficiency practices and programs to targeted users. These strategies leverage both past program successes as well as best practices studies that have confirmed that the targeted market segments rely substantially on local and industry-specific organizations for information and support.

v. IOU program interactions with CEC, ARB, Air Quality Management Districts, local government programs, other government programs as applicable

The SoCalGas Agricultural Energy Efficiency Program will support integrated marketing opportunities for distributed generation from biogas, biomass, solar, fuel cells, and wind, as well as agricultural-based community-scale generation projects. These efforts support customer needs and wants, state renewable energy targets (through newly available small generator Power Purchase Agreement contracts), AB 32 greenhouse gas reduction targets, and emerging carbon markets and offset programs (such as the Chicago Climate Exchange or through the California Climate Action Registry). Consistent with California's preferred loading order, however, the IOUs will continue to aggressively market and support energy efficiency first, as California's most cost-effective energy resource, while also being mindful of the customer's ultimate interests and goals.

vi. Similar IOU and POU programs

IOU program activities will be coordinated with other agencies' and organizations' territories containing a substantial agricultural base, as opportunities present themselves. This will ensure that California's agricultural customers receive consistent messages.

b) <u>Program delivery and coordination</u>

i. Emerging Technologies program (ET)

The long-term energy efficiency vision of California can be attained through the continuous development, verification, and acceptance of new technologies into the market. IOU portfolio staff actively works with statewide emerging technologies staff to identify new emerging technologies, support evaluation and demonstration, develop and promote case studies, and market results to applicable customers towards total market penetration. The programs coordinate specifically with universities to supply market-ready and viable technologies into the ET portfolio.

The IOUs will use a formal technology integration process for incorporating emerging technologies into the program. This process will be designed to track technologies/tools to be assessed, timeline to deployment, integration, codes and

standards actions, expected actions of other players (such as manufacturers and ENERGY STAR) and other related information. The statewide program management team will work with other partners to update and execute the technology integration process, based on developments in technology, the program, and the market context. This process will be updated regularly to reflect current conditions.

ii. Codes and Standards program

The SoCalGas Agricultural Energy Efficiency Program relies on the Codes and Standards Program to help maintain an updated and relevant list of measures that will support agricultural savings. As codes and standards evolve, the program will act to align itself with appropriate offerings. It is important to manage the measure life cycle to take full advantage of providing incentives before moving them into code. The program will coordinate with the Codes and Standards Planning and Coordination sub-program. Programs will include new offerings that will allow flexibility in adapting to changes in codes and standards, market trends, and technologies. Planned enhancements to Title 20 and 24 will be reflected in incentive levels and eligible measures and services. In the Statewide Agricultural Energy Efficiency Program, current work focuses on transitioning the market to accept new refrigerated warehouse code changes, and incorporating best practices and advanced refrigeration practices into that marketing and outreach effort. Towards that end, the Statewide Agricultural Energy Efficiency Program will continue to coordinate closely with crosscutting Codes and Standards, Workforce Education and Training, and industry partners and associations, and will utilize the Statewide Agricultural Steering Committee to enhance the coordination effort.

iii. WE&T efforts

Workforce Education & Training (WE&T) efforts support the education and training of a robust network of industry trade allies, vendors, engineers, design teams and others supporting the market transformation strategies of the Strategic Plan. In general, the SoCalGas Agricultural Energy Efficiency Program will interface with the WE&T Program Implementation Plan to serve the goals of the Strategic Plan.

WE&T efforts will include specific activities to support the various sub-programs. In addition, training on Title 24 code changes, industrial refrigeration best practices, and ANSI Superior Energy Performance certification will also be provided. The latter will be contingent on program developments occurring at the national level.

In the interim, the statewide agricultural program will support the same superior energy performance concepts and principals through Continuous Energy Improvement workshops available for customers and trade allies. Additionally, DOE process system trainings (pumps, motors, steam, and compressed air) will be offered by IOUs statewide to lay the groundwork for certification level classes,

once they have been developed nationally and are ready for rollout. The IOUs will be coordinating closely with national efforts and have expressed openness to discuss piloting certification classes. As a result, California will be poised to adopt this national standard and be a leader in this effort.

The education and training generally takes place through IOU energy centers, technology test centers, and education and training program offerings. Working with the Statewide WE&T team, the agricultural program managers will also expand training opportunities to local universities and academic institutions that have agricultural-based programs (e.g. Cal Poly Pomona and San Luis Obispo).

iv. Program-specific marketing and outreach efforts

The IOUs are currently engaged in in-depth market segmentation analyses. The results of this work will be shared among the IOUs and incorporated into detailed marketing and sales strategies to ensure the IOUs are targeting the right products to the right customer at the right time, and utilizing the preferred method of communication.

This foundational segmentation and integration of programs and services will provide insight into customer mindsets, behaviors, responses and motivations to achieve the most effective level of energy use. Based on this in-process segmentation analysis, the IOUs will be able to focus on providing consistent marketing and overall messaging focused on customers' business and personal goals, unique needs, and specific environmental considerations.

The results of this strategic planning effort will help define successful program outreach efforts to address the diverse agricultural, food processing and related water customers segments. Such efforts are customized to suit the unique needs of each segment and customer profile. See the marketing section of 5.c, Program Design to Overcome Market Barriers.

For example, IOUs will continue to foster strategic partnerships with industry and commodity groups, and regional farm and food associations to engage in a multi-faceted approach to marketing energy efficiency practices and programs to targeted users.

Specific efforts may include:

- Attending Farm Bureau meetings and providing information in monthly newsletters;
- Close partnerships with key industry associations and participation in their annual conferences, with an effort to develop conference speaking engagements;
- Presence at technical conferences, targeting customers and trade allies;
- Targeted integrated education and training to specific market sectors to support peer-to-peer interactions and industry advancement;

- Media campaigns focusing on trade magazine ads and articles, discussing IOU program information and case studies;
- Targeted customer efforts through assigned IOU account representatives and program engineers, third parties, and government partnerships;
- Phone and web-based customer support and outreach;
- Development of coordinated statewide agricultural and food processing resources into a centralized "one stop shopping" clearinghouse, on Energy Design Resources; and
- Market sector specific collateral that drives customers to account representatives and/or Web sites for additional support.

Such efforts have already shown success in California's IOU programs and are identified as best practices in the American Council for an Energy Efficient Economy (ACEEE) comparative analysis of national agricultural energy efficiency programs.

Where possible and applicable, the IOUs will coordinate statewide in these targeted marketing efforts and partnerships to ensure cost-effectiveness and a consistent approach to customer-facing activities. Cost-sharing at industry conferences, co-sponsoring workshops, and identifying opportunities for statewide media campaigns as well as co-development of web-based tools and resources will be pursued.

The Energy Design Resources website will be used as a statewide clearinghouse of best practices, technology information, case studies, updates on upcoming education and training, and to promote new tools and resources available to support the Continuous Energy Improvement approach, such as benchmarking and performance tracking tools.

Integrated and program-specific marketing efforts will complement and work in coordination with SW Marketing, Education and Outreach (ME&O) Program to increase awareness, provide education, and drive ongoing engagement and participation in DSM programs and services among nonresidential customers. The statewide effort will provide the first level with IOU specific programs providing reinforcement at a local level.

v. Non-energy activities of program

Refer to Section 6.f on "integration across resource types."

vi. Non-IOU programs

There are a variety of programs that will be coordinated with and leveraged in support of the program objectives. These include:

- Connecting customers with the CA Climate Action Registry;
- AB 32 support through CO2 tracking in program resources;

- Regulatory program coordination, including EPA air quality standards, water quality standards, and new refrigerant regulations;
- Non-IOU financing resources, including from water utilities, industry and private banking, state and federal incentives, funds, grants, and loan products to support energy and other resource management objectives;
- Water/Energy efforts within California;
- ANSI, for the Superior Energy Performance Standard; and
- ISO international energy management standards.

The program will continue to engage with Air Quality Management Districts, the California Energy Commission, the California Air Resources Board, the Department of Energy, water agencies, and other government agencies on programs impacting regulatory compliance and resource management.

vii. CEC

As of June 2012, PIER no longer exists. However, the program will interact with the Emerging Technologies Program to leverage new technologies to increase the list of measures available for energy efficiency projects. The portfolio staff actively works to incorporate promising emerging technologies.

viii. CEC Work on Codes and Standards

As indicated in Section 6.b.ii, planned enhancements to Title 20 and 24 will be reflected in incentive levels and in eligible measures and services.

ix. Non-utility market initiatives

The Statewide Agricultural Energy Efficiency Program will coordinate with applicable market initiatives to leverage market momentum and areas of mutual advantage. Modeling on the success of the IOU partnership with the wine industry California Sustainable Winegrowers Alliance, the program may leverage the following efforts:

- California League of Food Processing;
- California Farm Bureau Federation;
- California Citrus Grower;
- Almond industry sustainability energy planning;
- Wine Industry – CSWA Program initiative;
- Dairy Industry;
- Irrigation Districts; and
- ASHRAE / ARI efforts to develop refrigeration best practices.

c) <u>Best Practices</u>

- As described in prior sections, the SoCalGas Agricultural Energy Efficiency Program reflects the best of each IOU program's successful components of statewide agricultural program offerings, and introduces new elements from other

utilities and national efforts. These best practices include: Leveraging Local Agricultural Resources: i.e., industry associations and farm bureaus;

- Continuous Energy Improvement: An approach to transform the market and reduce energy intensity through addressing technical and management opportunities;
- Technical Assistance: Recognizes the need for personalized assistance for agricultural customers, which includes a full service approach starting from audits/pump tests to design and technical assistance, presentation of recommendations, resources to develop a long term plan, potential of project management assistance, with financial incentives and guidance on best practices.
- Vendor Partnerships: This strategy will be coupled with vendor support and educational workshops and classes provide the full breadth of support customers may need to influence their decision to implement energy efficient equipment and practices.
- Statewide Coordination: In order to take advantage of the statewide implementation of the program, the IOU program representatives will meet on a quarterly basis to improve program operations by sharing successes and areas of operational concerns.
- Program Improvement Collaboration: the IOUs will solicit input from various stakeholders in the agricultural industry (including but definitely not limited to the California Farm Bureau and the CPUC's Energy Division) to enhance current program offerings and increase participation of agricultural customers. These exchanges will occur two to four times a year as deemed necessary.

d) <u>Innovation</u>

A bundled and integrated product and service offering will integrate with multiple resource management solutions, offering a new and customer-centric approach to programs. This is supported by innovative customer segmentation work by the Marketing and Outreach IOU teams. Significant innovative aspects of the SoCalGas Agricultural Energy Efficiency Program include:

Integration

The Statewide Agricultural Energy Efficiency Program integrates demand side management strategies, and develops methods and pilots to promote integration of interlinked environmental and resource management issues. By improving the coordination of these issues of paramount importance to the industries being served, more face-time will be possible with large customers, projects will become more cost effective, and multiple problems will be solved concurrently. Specifically:

- Continuous Energy Improvement will foster a long-term energy management approach and support integrated demand side management.
- An innovative food processing pilot will integrate energy, air, water, GHG, and (potentially) waste streams.
- Integrated Comprehensive Energy Audits will provide targeted customers with integrated solutions in efficiency, DR, and DG, and may advise customers on

other sustainability practices (for example, water conservation opportunities, CO2 reduction potential, and other programs references).

- IOUs will link customers with the California Climate Registry to identify the carbon footprint of a customer's plant.
- IOUs will promote innovative agricultural opportunities such as dairy biogas to energy, biogas injection, waste stream utilization, solar generation, and community scale generation opportunities.

Marketing

- A market-sector approach to designing and delivering programs will allow IOUs to delve more deeply into market opportunities and overcome specific market barriers. This approach is supported by innovative market segmentation work currently underway at IOUs that will support development of new, precisely targeted integrated marketing and outreach plans outlining multiple delivery channels that target customers based on their needs.
- Closer coordination with third parties, government partnerships, core programs, and other delivery channels will optimize portfolio performance.
- IOUs will increase outreach to new trade and community-based associations, leveraging best practices identified in ACEEE study of IOU agricultural programs.
- Expanded workforce education and training efforts with vendors, design teams, industry association members and other key market actors will help overcome many customer informational and transactional barriers
- Energy Design Resources, developed statewide by IOUs, will be expanded as a web-based hub of agricultural and food processing best practice information, training, modeling and performance tracking tools.
- Training will be provided on modeling and quantifying savings opportunities through tools such as eQUEST and Energy Pro.
- Non-IOU financing tools and resources will be coordinated and communicated to help customers leverage available sources of funds to complete targeted projects.

Implementation

- IOUs will coordinate on process improvements to statewide programs to ease participation barriers.
- Energy performance measuring and benchmarking assistance/services to customers will enable customers to compare themselves to "best in class" peers utilizing tools such as the U.S. EPA's ENERGY STAR Benchmarking tool.

e) <u>Integrated/Coordinated Demand Side Management</u>

An integrated portfolio is cost-effective, captures program delivery efficiencies, and serves the needs and wants of customers who prefer a single, informed IOU point of contact to help inform and prioritize their energy investment decisions based on their unique needs. Consistent with Commission direction and with the Strategic Plan, the Statewide Agricultural Energy Efficiency Program includes integration of energy

efficiency, demand response and distributed generation programs in integrated audits, marketing materials and industry-specific workshops. To this end, the statewide IOUs and the Statewide Agricultural Energy Efficiency Program has made progress in advancing integrated solutions.

The IOUs are placing major emphasis on marketing to get the right message to the right customer at the right time. Advanced customer segmentation is being used to develop detailed integrated marketing and outreach plans which outline multiple tactics, delivery channels and key messages to target to specific customers based on their specific needs. The IOU account representatives, who serve as the key customer point of contact, will be attending an integrated sales strategy and training program to ensure consistent delivery of portfolio offerings.

Education and training, particularly workshops organized around a customer segment, provides an ideal situation to integrate customer energy solutions. IOUs will provide integrated workshops to dairies, wineries, and food processors. These workshops will cover topics, such as resources analysis and methods, conservation, efficiency, demand response, and generation topics and resources. These workshops provide opportunities for IOUs to cross-sell solutions and share key information from other IOU departments (for example, sharing biogas injection information at dairy workshops). They also provide opportunities to look at water, air, carbon credit and waste management issues.

As appropriate, Workforce Education and Training (WE&T) will also cover integrated energy and system solutions, which will be increasingly important as Critical Peak Pricing matures. The Agricultural Program will coordinate with the WE&T group on curricula development and class planning.

The availability of a Continuous Energy Improvement approach, especially for the largest, most strategic customer accounts, will facilitate a thoughtful, integrated energy plan and will allow IOUs to stay engaged in supporting the progress of that plan.

Integrated comprehensive energy audits combine funds and resources of energy efficiency (EE) and demand response (DR) programs to provide integrated recommendations to customers. These audits provide customers with EE and DR recommendations and also provide general feasibility assessments for distributed generation (DG). Integrated comprehensive energy audits will be offered to customers with loads greater than 500 kW and all integrated audits will focus on EE, DR and DG options. In addition, the IOUs are developing an enhanced web-based integrated audit tool[17] for customers and internal IOU personnel. The integrated audit tool will be the principal tool to provide IDSM information to customers with loads less than 200 kW and will be used by the CSI program for determining EE opportunities prior to

[17] Integrated audit tool is referenced as a general term in the statewide PIPs; each IOU has a specific name for its tool. PG&E's tool is the Progressive Energy Audit Tool (PEAT). SDG&E, SoCalGas, and SCE's, tool is the California Integrated Customer Energy Audit Tool (CICEAT).

installation of solar equipment. It will be capable of generating customer reports that include specific information on the costs and benefits of IDSM programs.

Emerging Technologies and CEC collaboration is expected to include pilot projects and market acceleration assistance for market-ready products in the general categories of day lighting, lighting, HVAC, controls, and building envelope improvements.

f) Integration across resource types (energy, water, air quality, etc)

California's agricultural and related food processing sectors face a multitude of environmental and regulatory challenges that threaten their survival and competitiveness. In 2009, a severe drought is impacting California's farmers and increasing water pumping costs. In addition, new regulations aimed at improving air quality, water quality and reducing toxic environmental pollutants are proving to be expensive and disruptive to business as usual. Both these are impacting energy use and compliance.

The Agricultural Energy Efficiency Program proposes to leverage these challenges to coordinate with the regulating agencies and the programs they are operating in order to support mutually advantageous program designs, customer incentives, marketing opportunities, and implementation opportunities. For example, the IOUs will continue to offer targeted trainings to customers who are sharing common regulatory challenges. In 2008 PG&E hosted three very successful workshops called NO_X – Comply and Save, which educated customers on impending regulations, requirements for their boilers, and the most efficient project options to consider for compliance. This workshop will be expanded statewide and offered at the other IOU energy centers. In addition, additional workshops will look at wastewater treatment options, refrigeration upgrades, and energy efficiency to meet AB32 targets.

IOUs will pursue opportunities to partner with water agencies to offer joint energy and water incentives to support projects that reduce both resources, which reduces project costs and improves payback. In early 2013 SCG will release a solicitation to improve water systems efficiency testing the application of natural gas water pumping, leak detection, and pressure management solutions. The solicitation will invite stakeholders such as water districts, local governments, trade associations, research institutions, the agricultural sector, and others, to propose projects that save energy and reduce water usage. The solicitation will build off recent pilot programs, research, and best practices to define calculation methodologies and to lead to improved future program planning.

An IOU is currently conducting a study to evaluate emerging water quality requirements in the state, and address best practices in comprehensive water related energy management in seven agricultural/food processing sub segments. The study will reflect statewide practice as much as possible. The results will be shared with the other IOUs, as well as posted on Energy Design Resources.

Where applicable, the program will integrate topics like GHG reduction and water conservation into targeted customer workshops, marketing and communications, building

on a strong track record from the 2010-12 program cycle. For example, one IOU is currently conducting a series of winery workshops focusing on GHG reduction strategies, water management, Energy Management 101, and Green Building which includes materials and water. Ads and articles featured water savings opportunities and messaging.

g) Pilots

Traditionally agricultural customers are a high cost group to provide significant energy education to. They are geographically dispersed and typically time constrained. Energy efficiency is not a primary concern, and although the IOUs have established high value relationships with these customers, many times it takes more to get them to accommodate new technologies.

IOU Test Strategic Approach for Agricultural Segment

The IOUs may implement a Test Strategic Approach (TSA). The TSA is based on identifying agricultural sub-segments where the IOU(s) have strong relationships with an industry or trade association. The objective is to leverage the trade association's needs with IOU's knowledge and experience with energy efficiency, demand response and self-generation opportunity and solutions and in collaboration with the trade association leadership, educate sustainability and energy efficiency solutions to their membership.

This model is based on a successful effort implemented by the California Association of Winegrape Growers with Pacific Gas and Electric. For more information on their efforts, website link: http://www.cawg.org/CAWGProjects/SustainableWinegrowing/ProjectDescription.aspx.

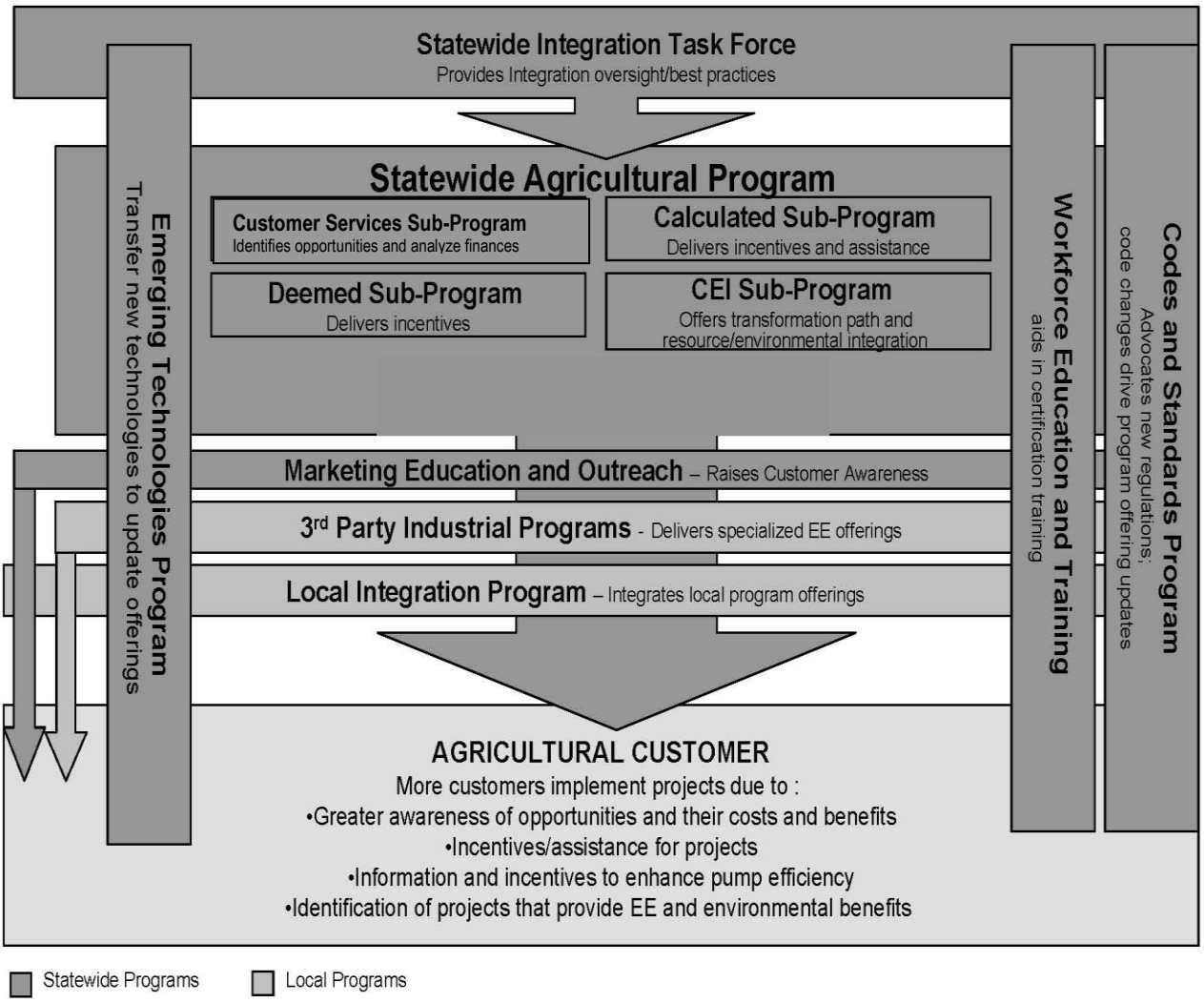
The IOU's intend on implementing methods to gather and retain more detailed performance and usage data on a pilot basis to determine the more effective methods to achieve savings. Exploring incentives for sub-metering is an option as is expanding the tool library in lieu of incentives.

h) EM&V

The IOUs are proposing to work with the Energy Division to develop and submit a comprehensive EM&V Plan after the program implementation plans are filed. This will include process evaluations and other program-specific studies within the context of broader IOU and Energy Division studies. More detailed plans for process evaluation and other program-specific evaluation efforts cannot be developed until after the final program design is approved by the CPUC and in many cases after program implementation has begun, since plans need to be based on identified program design and implementation issues.

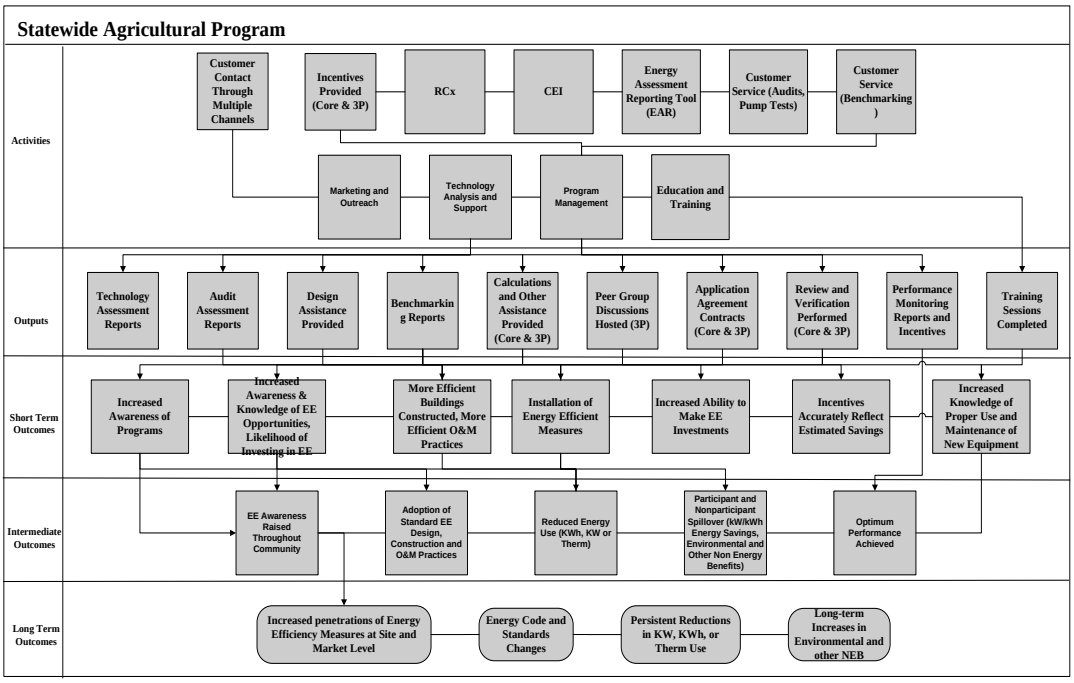
2013-2014 Energy Efficiency Programs
Statewide Agricultural Energy Efficiency Program
Program Implementation Plan

7. Diagram of Program



2013-2014 Energy Efficiency Programs
Statewide Agricultural Energy Efficiency Program
Program Implementation Plan

8. Program Logic Model



2013-2014 Energy Efficiency Programs
Statewide Agricultural Energy Efficiency Program
Program Implementation Plan

1. **Program Name:** Agricultural Energy Advisor
   Program ID: SCG3717
   Program Type: Statewide Core Program

2. **Projected Program Budget Table**

   Table 1 – See the overarching program for budget details.

3. **Projected Program Gross Impacts Table**

   Table 2 - See the overarching program for savings details.

4. **Program Description**

   a) **<u>Describe program</u>**

   The Statewide Investor Owned Utilities (IOUs) have created the Agricultural Energy Advisor (AEA) to bring together under one program all services offered to support customer education and participation in energy efficiency, demand response and self-generation energy reducing opportunities and benefits, along with awareness of greenhouse gas and water conservation activities.

   CPS was created to provide a streamlined and coordinated assignment of right-sized customer solutions. The key is to start the process with an initial analysis of a customer's needs, determination from the analysis which audit will service the customer with the highest cost/benefit, identify additional program support and key indicators that will motivate the customer to implement energy saving recommendations

   The IOUs anticipate the restructuring of AEA will affect the way audits are provided. AEA will enhance the IOUs' ability to match customers' need(s) with the right audit service. This will result in an increased cost-effective delivery of these audit services with an increased expectation for customer adoption/installation of provided customer specific recommendations.

   In its offerings, AEA will place an emphasis in deep energy saving measures and emerging technologies where appropriate. When the technologies and customer opportunities are correctly aligned, the customer will become more open to the benefits these technologies offer to their business and will therefore increase their acceptance and adoption.

   Together the AEA offerings will work to support the achievement of Strategic Plan objectives across the agricultural sector.

   The IOUs believe this approach is the best way to influence market transformation, serve customers' needs, and increase adoption of DSM solutions.

2013-2014 Energy Efficiency Programs
Statewide Agricultural Energy Efficiency Program
Program Implementation Plan

The Agricultural EA package, consists of five distinct offerings:

- **Benchmarking** is the first step for a customer to begin to understand the energy use of their building. Benchmarking is an initiative designed to educate and motivate customers to measure and track the energy use of their facilities, educate customers of the benefits of benchmarking their facilities and how they can track the impact of energy savings after implementing energy saving measures. To support the customer's efforts, the IOUs will offer technical support, hands-on workshops that will provide customers with information on what benchmarking tools are available, how to benchmark, how benchmarking can be used as an energy management tool and what to do next after benchmarking.

  The IOUs will develop or continue Benchmarking initiatives that supports the customers' ability to comply with AB1103's benchmarking requirements as applicable and upon its implementation, utilizing ENERGY STAR Portfolio Manager and IOU supported Automated Benchmarking Services.

  The IOUs will also continue to offer customers technical support ranging from email and phone hotlines, hands-on workshops and web-based benchmarking educational and instructional materials.

  The IOUs will continue their support to identifying, evaluating and making information about other benchmarking tools available.

  The primary focus for benchmarking activities will continue to be centered on commercial buildings within the agricultural sector (in alignment with the target building type of AB 1103).

- **Agricultural Continuous Energy Improvement (CEI)** Continuous Energy Improvement (CEI) is a consultative service aimed at helping agricultural customers (IOUs will target CEI services inline with market segment potential in their service territories and resource availability) engage in long-term, strategic energy planning. Corporate energy management is not currently part of normal business operations for the majority of IOU customers. With current economic pressures forcing customers to reduce costs and focus more on their core business, it is likely to be further marginalized. CEI proposes to reintroduce the importance of energy management by transforming the market (and reducing energy intensity) through a comprehensive approach that addresses both technical and management opportunities and creates sustainable practices which address energy savings, reduction of greenhouse gas emissions and water conservation, through high-level energy commitments from executive and board-level management.

  CEI offers customers the pinnacle of audit offerings guiding executive management to levels of energy management self-actualization that makes energy and environmental issues a consideration in all management/business operational

decisions and in long term energy planning. For additional information about CEI, please consult the Agricultural CEI Program Implementation Plan.

- **Non Residential Audits (NRA)** for the Transition Period will provide Integrated Comprehensive Energy Audits (ICEA) that focus on customer energy savings, cost/benefits , and the targeted delivery of financial and technical assistance. Audit information must communicate complex information in a simple and understandable way to enable customers in identifying energy efficiency, demand response and distributed generation opportunities. Audits use "ex ante" Deemed and Calculated methodologies for energy savings analysis information.

  As stated above, NRA offers ICEA. In Appendix A, each IOU defines the sub-categories of ICEA that they provide.

  In this program cycle, emphasis will be given to meeting requirements of the California Long Term Energy Efficiency Strategic Plan (Strategic Plan), streamlining the audit process, increasing its efficiency, lessoning complexity, and increasing the effectiveness of influencing customer implementation actions through actions such as integration of the demand response technical audit component directly into NRAs offerings. In addition, the IOUs will investigate ways to implement meaningful financial measurements such as return on investment and/or simple payback metrics. The key is ensuring that financial tools selected provide the customer with meaningful information by ensuring cost assumptions are appropriate to the customer. Also, NRA will assume the audit and budget responsibilities for Demand Response's technical audit services, as applicable. It is intended that these audits will be a critical component of the integrated comprehensive audit service offering.

- **Pump Efficiency Services** is designed to help agricultural customers make informed decisions about improving inefficient pumping systems and operations through recommendations derived from pump test audit or direct observations of processes. Pumping of water is estimated to account for more than 80% of the electric load and 73% of the natural gas requirement in California's agricultural segment, and this load is growing as the state's water users increase their reliance on pumping water to meet their needs. Pumping is also estimated to account for 20 to 25% of energy usage within the nation.

  The Pump Efficiency Services program element, implemented by a team of trained in house or third party contractors, aims to overcome key informational, technical, and financial barriers to pump optimization by offering pump tests, retrofit incentives, and targeted education, training and technical support for customers and pump companies. Each IOUs database of pump test results will be used in the near-term to target pumps in need of retrofit as a means to capture savings. However, pump performance data aggregation at the statewide level will contribute to the development of metrics and targets for pump improvements, in

support of a statewide pumping focus on agriculture, supporting their strategies and objectives.

The IOUs will continue to offer pump testing services at no or low cost and pumping system efficiency workshops through their energy education centers or other event opportunities during the Transition Period.

- **Retro-commissioning:**
  Not Applicable.

  The Transition Period will be used to develop and test the AEA design strategy. The strategy focuses on simplifying the way audits are provided to customers. Through various assessment functions, the IOUs will work with the customer to identify the best, most cost-effective solution and the one with the greatest potential to motivate the customer to implement energy saving solutions (i.e. primarily EE, DR, and SG).

  It is anticipated AEA will allow the expansion of audit serves across diverse class of customers, potentially across all segments and will interconnect the customer with the wide and diverse range of programs offered. From a customer perspective, the impact on customer time and resources will be reduced, the audit analyses will include DSM, greenhouse gas reduction information, provide water conservation recommendation all in a single report. The resulting report will identify comprehensive solutions that will simplify the customer decision-making process.

The primary program objectives for 2013-2014 are:

- Support the Strategic Plan by offering integrated audits across a wide selection that address the full spectrum of energy solutions, including energy efficiency, demand response, and distributed generation (California Solar Initiative and distributed generation), focusing on agricultural facilities as defined by each IOU's market potential and resource availability.
- The continuation of delivering high value audit reports to the customer. Audit reports will be designed in such a way that they will provide the customer with information which motivates them to implement energy efficiency, demand response and consider renewable generation options.
- Enhance efforts to identify and provide financial analyses focused on deeper energy savings and technologies. Identify ways different financial metrics, such as return on investment and/or simple payback, can be provided where the values presented have meaning to the customer.
- The IOUs will explore and evaluate the potential of enhanced customer incentive options that are contingent on a customer's receiving an audit prior to applying to incentive programs.
- Incorporate new and/or emerging technologies appropriate for the customer's facility.

- Develop and implement enhancements to current Benchmarking workshops (targeting agricultural buildings) and continue providing Benchmarking and AB 1103 technical support through established and new delivery channels.
- Encourage Statewide consistency by offering a similar energy audits with the ultimate goal of offering customers the best energy management practices and technologies.
- Enhance the AEA' offerings by including activities such as, but not limited to:
    - The highlighting of emerging technologies and deep energy savings opportunities and providing education on long-term energy planning/project management strategies (in coordination with CEI program).
    - Will continue existing water saving services and develop Leak detection services and strategies which will offer the service to customers in all customer segments as determined by the IOUs to provide customer benefits and cost-effective to administer. The services will, be offered through the use of audit teams, in house and/or contracted, and may be required as a service in the delivery of all integrated comprehensive audits.
- AEA will play a key role in exploring options regarding identifying deep energy savings and promotion of emerging technologies.
- AEA will develop processes to help energy audit teams and customers identify facilities and services that will provide the greatest return on benefits from the audit. The IOUs may explore leveraging tools to complete energy audits, usage analysis, assessments and/or building performance benchmarking as the first step in determining a customer's need.
- AEA will develop processes to help energy audit teams and customers identify facilities and services that will provide the greatest return on benefits from the audit. The IOUs may explore leveraging tools to complete energy audits, usage analysis, assessments and/or building performance benchmarking as the first step in determining a customer's need.AEA may also enhance tracking and audit component capabilities to support customer needs analysis, reduce program application barriers, maximize recommendation follow up and streamline audit report generation.

b) <u>List measures</u>

The AEA primarily offers non-resource, auditing services. It does not offer incentives, but ultimately influences the customer's implementation of energy efficiency, demand response, and self-generation opportunities in combination with incentive from the core Agricultural incentive programs (refer to the Agricultural Deemed and Calculated sub-programs for specific information). However, each IOU reserves the ability to offer incentives specific to AEA's individual service offerings.

c) <u>List non-incentive Agricultural Energy Advisor Services</u>

The Agricultural Energy Advisor sub-program (AEA) is designed to deliver a coordinated and customer-specific service. AEA features a statewide integrated demand side management customer-specific solution that promotes energy efficiency, demand

response, distributed generation and emerging technologies as appropriate to the customer's need(s).

Such activities include, but are not limited to: energy management assessments, energy planning, marketing and outreach, baselining and benchmarking, project implementation support, technical support, energy savings calculations, process evaluations and report generation, and web-based energy resources.

5. Program Rationale and Expected Outcome

a) Quantitative Baseline and Market Transformation Information

By its nature, market transformation occurs as a result of numerous factors and programs, not single sub-programs. Therefore, all metrics are proposed at the program level. Please refer to the quantitative baseline and market transformation discussion, presented in the overall program PIP.

Table 3 – Refer to the overarching program for quantitative baseline metrics

b) Market Transformation Information

By its nature, market transformation occurs as a result of numerous factors and programs, not single sub-programs. Therefore, all metrics and goals are proposed at the program level. Please refer to the quantitative baseline and market transformation discussion, presented in the overall program PIP.

Table 4 – Refer to the overarching program for market transformation metrics

c) Program Design to Overcome Barriers

The AEA offers services which change corporate/management cultures that prevent successful implementation of comprehensive energy policies. These offerings help overcome customers' lack of awareness of DSM opportunities by providing a customer focused, comprehensive package of energy solutions designed specifically to motivate the customer to implement recommendations. Information such as cost/benefit analysis (i.e. ROI or simple payback) and identification of appropriate IOU incentive and/or finance programs, can significantly enhance the financial benefit of the energy saving recommendation. AEA also provides customers with tools to measure the effects of implemented energy savings actions on their bottom line.

AEA brings together audits and related services to implement energy saving activities.

d) Quantitative Program Targets

The targets provided herein are best estimates, but nonetheless are forecasts.

Table 5

	Program Target by 2013	Program Target by 2014

Number of Audits	63	65

e) <u>Advancing Strategic Plan goals and objectives</u>

The AEA is designed to promote DSM coordination and the integration strategies of the Strategic Plan. Foremost are recognition of the linkage between energy and environmental policy and the importance of integrating energy efficiency, demand response and distributed generation to support California's plan to reduce greenhouse gas emissions.

Specific near-term strategies proposed by the Strategic Plan that are addressed by the AEA include:

- Identify New and Improved Tools and Strategies to Reduce Energy Consumption in agriculturalfacilities.

  Starting with energy conservation and proceeding to distributed generation and demand response opportunities, the benchmarking, CEI, and NRA demonstrate to the customer a comprehensive, site-wide solution for near and longer term energy consumption and clearly state the positive greenhouse gas effects of their actions. Addressing customer energy needs through long-term solutions allows consideration of technologies and projects that benefit the state and planet for a decade or longer (e.g., HVAC systems, industrial/ agricultural processes and equipment, facility envelope upgrades and enhancements). Recommendations for retrofit opportunities within existing agricultural facilities contribute to California's zero net energy goals. Once implemented, recommendations for operation and maintenance (O&M) practices on on-going commissioning will ensure that customer facilities continue to operate in an efficient manner.

- State/Local Governments and Major Corporations Commit to Achieve EE Targets

  AEA's offerings will seek to (1) gain corporate level commitment to energy efficiency as a core business operation; (2) develop corporate energy policies that establish measurable goals; (3) develop an actionable plan to achieve these goals; (4) guide customers to IOU programs that can help implement cost-effective EE projects; and (5) provide a feedback loop to measure performance. This codified process is designed to support the significantly greater energy efficiency performance desired by the Strategic Plan.

- Develop Tools to Reduce Energy in Agricultural Facilities.

  As part of the implementation of specific AEA offerings, the IOUs will partner with energy industry peers, industry associations, and DOE/CPUC-sponsored labs and consultants to enhance the use of existing tools and explore new tools to help agricultural customers reduce initial energy usage at their facilities, then continue to operate their facilities in an efficient manner. Current tools used for benchmarking tools and resources include those developed by the EPA for

ENERGY STAR and by Lawrence Berkeley National Lab (LBNL) with CEC funding:

- Management Standard for Energy SME2000-2008;
- LBNL Superior Energy Performance; and
- ISO-50001.

- Develop Business Models to Deliver Energy Management Solutions

  AEA's offerings will address the fundamental purpose to influence decision making practices from Agricultural, customers to consider energy usage and sustainability as a core part of their daily operations. This level of commitment will help achieve greater penetration of energy efficiency in the agricultural market sector.

In addition, AEA's offerings promote acceptable practices of accounting, auditing, and evaluation by:

- Offering integrated and focused audits, benchmarking, savings calculation assistance for retrofit and simplifying the audit-to-project documentation process to bridge the gap between educating customers about energy solutions to environmental issues and taking action;
- Guiding and supporting customers as they implement technologies, processes and practices to achieve energy efficiency savings; and
- Long term energy planning support.

6. Program Implementation

- Assess and identify the best way to support the use of the BEARS tool.
- Enhanced current Benchmarking workshops and continue providing Benchmarking and AB 1103 technical support through established and new channels.
- Emphasize and support integration in emerging technologies and deeper energy measure opportunities.
- In coordination with incentive programs, identify ways to streamline the end to end process for customers wanting to participate in IOU energy saving programs.

Statewide IOU coordination

i. Program name: Agricultural Energy Advisor Program

ii. Program delivery mechanisms

AEA will employ a variety of delivery mechanisms or channels. Most of AEA's offering will use IOU customer energy efficiency staff and contractors, service and sales representatives, website and/or marketing and outreach efforts. Other delivery channels may also be developed.

In addition, where applicable, IOU customer account representatives or program management staff will support this activity within the statewide agricultural sector, as well as third parties, government partnerships, and local programs.

iii. Incentive levels

Not applicable.

iv. Marketing and outreach plans

A comprehensive audit marketing plan will be aligned and coordinated with the marketing plans for each of the IOUs, in order to maximize effectiveness, integrate offerings, and as appropriate refer customers to relevant DSM programs.

Additionally, IOUs may investigate piloting alternative channel marketing, such as social media tools, and outreach options that might include community-based organizations and/or third parties to recruit small businesses and influence them to take actions that result in energy efficiency improvements. IOUs may investigate and test efforts to leverage relationships with trade associations as a way to increase cost effectiveness of reaching customer groups.

The IOUs are currently developing an in-depth segmentation of the agricultural market. The results of this customer segmentation will support the development of targeted integrated marketing and outreach plans outlining multiple delivery channels that target customers, based on their needs and preferences. Such delivery channels will likely include increased customer outreach through trade and community-based associations, third parties, government partnerships and core IOU programs.

v. IOU program interactions with CEC, ARB, Air Quality Management Districts, local government programs, other government programs as applicable

AEA's energy recommendations will continue to recognize the regulations required by other bodies. For example, information about GHG reductions resulting from AB 32 may be incorporated into the customer recommendations and to factor into the projects cost-effectiveness and water conservation information will be included in the reports as appropriate.

Program offerings will collaborate and support the CEC's AB 1103 mandate by assisting customers with technical and awareness activities. AEA will advance the introduction of the BEARS and California Rating Tool, where reasonable.

AEA recognizes the efforts of the CEC's Green Building Initiative programs, DOE's "ISO plant certification" programs, EPA EnergyStar Portfolio Manager benchmarking, EPA Building Performance with Energy Star and other programs, USGBC LEED certification, and local and other government incentive programs and will leverage such activities to the customer's benefit.

2013-2014 Energy Efficiency Programs
Statewide Agricultural Energy Efficiency Program
Program Implementation Plan

a) Program delivery and coordination

The sub-program will be coordinated with the following activities, as applicable:

i. Emerging Technologies program

The SW AEA Management Team will stay abreast of and incorporate relevant emerging technologies into audit recommendations as appropriate.

ii. Codes and Standards program

AEA implementation will include information about pending new codes and standards that may affect planning or prioritization of retrofit or new construction projects. Audits reports will include customer recommendations that are consistent with current governing codes.

iii. WE&T efforts

AEA implementation will integrate with WE&T efforts, as needed, by providing CSI process, lessons learned, and case study input to energy engineering curriculum designers for community colleges and universities. This activity will be coordinated through the Statewide WE&T program team and will ultimately be integrated into the web portal that team is now developing. IOUs will assess and support specialized WE&T training to help target working energy management professionals, industry professionals, and those pursuing education in universities and colleges.

IOUs will also continue with WE&T coordination to integrate sector strategy approaches, as required.

iv. Program-specific marketing and outreach efforts

In 2013-2014, AEA marketing campaigns will provide a wide range of action-oriented solutions targeted to specific segments and subsegments of business customers. In addition, AEA marketing efforts too will be "bundled"as menu of demand response, energy efficiency and conservation programs providing customers with a full array of EE and DR opportunities. By providing packaged energy management solutions for each industry segment, the IOUs will be better able to communicate with and serve customers.

Marketing activities will target business customers and select effective channels to reach entities such as: trade associations, local business groups and government entities to generate interest and program participation. In addition, direct customer contact by account executives, phone and e-mail support may be utilized.

Marketing collateral and messages for energy efficiency will be integrated with other IOU programs. Through additional market segmentation and feedback from customers, IOUs will further adjust approaches based on the varied needs of targeted customers. Additional sub-program marketing will be accomplished by

leveraging local third-party programs. Specific IOU marketing budgets are provided in Table 1 of the core agricultural program.

Integrated and program-specific marketing efforts will complement and work in coordination with SW Marketing, Education and Outreach (ME&O) Program to increase awareness, provide education, and drive ongoing engagement and participation in DSM programs and services among nonresidential customers. The statewide effort will provide the first level with IOU specific programs providing reinforcement at a local level.

v. Non-energy activities of program

The IOU's AEA team will participate in Statewide and national efforts to develop and enhance audit, benchmarking and continuous energy improvement tools and practices. Such activities will likely occur in conjunction with ongoing industry efforts managed by the California Energy Commission (CEC), Consortium for Energy Efficiency (CEE). ENERGY STAR and the California Commissioning Collaborative (CCC).

CEI implementation will include non-energy activities such as recognition awards, local area or sector competitions, awareness campaigns, education about non-energy-related LEED points and definitions, and use of computerized financial analysis tools and cost estimating and forecasting tools

vi. Non-IOU programs

AEA reports will include information on non-IOU Programs to expose customers to funding, such as from air or water agencies, to support integrated efforts. AEA will partner with programs offered by CEC, ARB, Air Quality Management Districts, ENERGY STAR, and other government and quasi-governmental agencies to capitalize on opportunities to develop co-branded program information and marketing collateral target to agricultural -sector customers, as opportunities present themselves.

With respect to water conservation, IOU program managers will partner with the local water districts to co-brand marketing collateral, attend trade shows, co-release notices, for programs with interactive water and energy effects (ESPM, BEARS, California Rating Tool, Water Agencies and others)

vii. CEC

SoCalGas will continue collaboration efforts with the CEC in energy efficiency tool development and seek to promote adoption of new technologies developed through the CEC's processes and to educate customers to demonstration, research and/or pilot projects. Specific AEA offerings will encourage recommendations addressing new technologies, processes, and methods, as identified in CEC projects, which will enable customers to achieve energy efficiency "stretch" goals

that produce significant energy savings beyond an established baseline in a cost-effective manner.

viii. CEC work on Codes and Standards

AEA will not be implemented with a direct linkage to codes and standards efforts. Although AEA will reflect code regulation in its energy savings calculations as deemed appropriate.

ix. Non-utility market initiatives

Education about federal tax incentives for energy efficiency investments is an example of non-IOU information and guidance that AEA offerings will provide to customers. In addition, the IOUs will participate in state and national efforts to develop and/or improve benchmarking tools and services that can be used by customers to better facilitate their adoption of sustainable energy management practices.

b) Best Practices

The IOUs will continue to leverage best practices and lessons learned at regularly scheduled statewide program management meetings. These meetings are forums to discuss program design and implementation issues, and as appropriate, provide statewide collaborated guidance in RFP solicitations and awareness of program offerings so customers operating multiple facilities across IOU service territories receive the same customer experience.

Other best practices approaches apply the principles of well-known business continuous improvement programs, such as Lean Six Sigma and ISO standards, to facility and plant energy management, in order to achieve widespread adoption of long-lasting sustainable energy management practices in the agricultural market sector. As stated above, these principles are: (1) Commitment, (2) Assessment, (3) Planning, (4) Implementation, (5) Evaluation, and (6) Modification. This approach will continue through the two-year program cycle for 2013-2014, allowing longer-term and deeper project development engagement with customers.

c) Innovation

For 2013-2014, the IOUs are identifying and evaluating program processes to increase effectiveness, simplification and increase the benefits the program delivers. Each IOUs set of lessons learned from these efforts will be shared and implemented to enhance energy savings benefits to all California IOU customers.

AEA will engage in a process of continuing improve as a new standard way of packaging energy efficiency, demand response and self-generation products and services, aimed at helping customers engage in long-term, strategic energy planning. It proposes to transform the market and reduce energy intensity through a comprehensive approach that includes addressing both technical and management opportunities.

Depending on the outcome of the 2012 process evaluation, CEI may consider customer incentives to accelerate project implementation (including IDSM projects), and reward customer for implementing strategic energy management.

Other AEA offerings may also consider specialized incentives approaches based on delivery, target markets and/or other opportunities.

d) Integrated/Coordinated Demand Side Management

AEA will provide a comprehensive approach for integrated audit services. Its services will have the flexibility of meeting every level of a customer's audits needs from integrated comprehensive audits to targeted or focused audits, which centers on specific systems or processes, to assessments or general walk through audits or online "do-it-yourself" audits (currently for small business customers), which when properly applied can assist in identifying the areas of a customer's greatest energy interest, financial capabilities of the customer's ability to invest in improving its energy use, and identification of other programs that can be brought into the discussion to motivate a customer to move forward with the energy saving plan.

The scope of services offered can coordinate the audit to look for retrofit opportunities; with benchmarking tools, or long term planning. Audit reports can present a truly integrated analysis to customers, seamlessly providing them with information and recommendations regarding energy efficiency, distributed-generation, demand response, greenhouse gas emissions and water energy savings, Customers will be referred to other IOU programs that will help them implement the recommendations resulting from the audit report and thus will be given a complete picture of their energy usage and options for reducing costs and using energy more efficiently.

e) Integration Across Resource Types

AEA will focus on DSM integration.

AEA implementation will include information on Non-IOU Programs to expose customers to funding, such as from air or water agencies, to support integrated efforts. IOU AEA managers will partner with the appropriate programs, when applicable, with government agencies to capitalize on opportunities to share program information, marketing collateral, and financial incentive analysis with customers.

Conventionally, each government agency and IOU has operated natural resource and energy programs independently, missing opportunities to serve customers who must manage more than one resource type. For customers who are regulated by or interested in more than one resource issue, CEI will provide information about the mutual benefit of combining complementary resource programs.

In the effort to promote AEA offerings, IOUs will seek out customers interested in complementary resource programs such as provided by water and air quality agencies. AEA will accomplish this by integrating key technologies and issues into the developing

Energy Assessment Reporting tool. The tool will assist in assessing a customer's interest, financial hurdle rates, and likelihood of implementing recommendations. With respect to water conservation, IOU program managers will collaborate with the local water districts to produce marketing collateral, attend trade shows, and co-release brochures, for programs with interactive water and energy effects.

f) Pilots

AEA services may consider the development of test markets especially in the introduction of new energy benchmarking or saving tools.

g) EM&V

The IOUs are proposing to work with the Energy Division to develop and submit a comprehensive EM&V Plan after the program implementation plans are filed. This will include process evaluations and other program-specific studies within the context of broader IOU and Energy Division studies. More detailed plans for process evaluation and other program-specific evaluation efforts cannot be developed until after the final program design is approved by the CPUC and in many cases after program implementation has begun, since plans need to be based on identified program design and implementation issues.

7. Diagram of Program

Please see the core program diagram.

8. Program Logic Model

Please see the Commercial Energy Advisor program logic model.

Audit Type Matrix

Audit Type	Description	Detail	SOCALGAS	SDG&E	PG&E	SCE
Integrated Customer Energy Audit		Phone	YES	YES	YES	YES
	The ICEAT audit is a customized audit specifically designed to help customers understand and identify their facility's energy use and provide concrete suggestions to maximizing energy efficiency (EE), demand response (DR). and distributed-generation opportunity as defined by the customer's need.	Online	YES	YES	YES	YES
		(Web-Based)				

		Onsite	**YES**	**YES**	**YES**	**YES**

2013-2014 Energy Efficiency Programs
Statewide Agricultural Energy Efficiency Program
Program Implementation Plan

1. **Program Name:** Agricultural Calculated Energy Efficiency Program
   Program ID: SCG3719
   Program Type: Statewide Core Program

2. **Projected Program Budget Table**

   Table 1 – reference the core program for budget details

1. **Projected Program Gross Impacts Table**

   Table 2 - reference the core program for savings details

2. **Program Description**

   a) **<u>Describe program</u>**

   The purpose of the statewide Agricultural Calculated Energy Efficiency Program is to provide services to improve the energy efficiency of agricultural facilities in California, including financial incentives based on calculated energy savings. The energy savings are calculated for measures installed as recommended by comprehensive technical and design assistance for customized projects. Integrated projects are encouraged to combine energy efficiency and demand response. Eligible projects include new construction, and retrofit .

   The Agricultural Calculated Energy Efficiency Program is part of a suite of programs within the Statewide Agricultural Energy Efficiency Program.

   The Agricultural Calculated Energy Efficiency Program is utilized for projects where a rebate is not available through the statewide Agricultural Deemed Energy Efficiency Program, customized calculations provide the most accurate savings estimates, or interactive effects between measures are best captured through whole building or whole system modeling.

   Because it presents a calculation method that can consider system and resource interactions, the program will become the preferred approach for supporting the integrated, whole system, and multi-resource management strategies of the Strategic Plan.

   Key features in the process include:

   - Energy audits of facilities and processes which recommend efficient design alternatives and detailing energy savings and CO_2 reductions;
   - Calculations/estimates of energy savings for exceeding Title 24 code or industry standard practice baselines;
   - Technical assistance from IOUs in energy audits and calculated savings;
   - Submission of project proposal for IOUs review and approval;
   - Pre-inspection by IOUs for approved retrofit projects;

- Post-inspections on approved and completed projects to verify performance; and
- Payment of incentives from IOUs.

Energy audits may be completed by customers directly or by authorized participants. Sponsors may include contractors, design teams, vendors, and energy service companies. The completed audit may then be submitted for review and approval.

For the energy audit feature, statewide consistent calculators are publicly available. The statewide IOU-created and maintained SPC Calculator can be used for retrofits and some new construction applications and is available online. For whole building construction projects, IOUs accept both Energy Pro, available for license, and the IOU-sponsored eQuest, available for free on the statewide Energy Design Resources website at www.energydesignresources.com, among others. Calculations must be submitted in open, unlocked, native format for review and consideration in the IOU's programs.

b) List measures

The broad range of measures eligible for incentives is summarized in the table below along with the current incentive levels. For detailed measure incentives, *see* Section 6.a.iii below.

The following measure categories are eligible for Calculated Incentives:

- Equipment Modernization
- Process Improvement
- Additional Miscellaneous Gas Measures

c) List non-incentive Agricultural Energy Advisor

The Agricultural Calculated Incentives Program is primarily an incentive program designed to achieve energy savings through measure implementation; however it does provide such non-incentive measures as technical and calculation assistance to help customers navigate through the application process. This assistance ensures that the sub-program captures lost opportunities by not allowing projects to fall behind schedule simply because the customer does not have the resources to shepherd the project through the process.

5. Program Rationale and Expected Outcome

a) Quantitative Baseline and Market Transformation Information

By its nature, market transformation occurs as a result of numerous factors and programs, not single sub-programs. Therefore, all metrics are proposed at the program level. Please refer to the quantitative baseline and market transformation discussion, presented in the overall program PIP.

Table 3 – Refer to the overarching program for quantitative baseline metrics

b) Market Transformation Information

By its nature, market transformation occurs as a result of numerous factors including projects/programs; not single project or sub-program. Therefore, all metrics and goals are proposed at the program level. Please refer to the quantitative baseline and market transformation discussion, presented in the overall program PIP.

Table 4 – Refer to the overarching program for market transformation metrics

c) Program Design to Overcome Barriers

The Calculated Energy Efficiency Program includes numerous features designed to overcome these barriers, as identified and discussed below.

Integrated Demand Side Management Approach

The program offers California's agricultural segment a statewide suite of products and services to help overcome market barriers to optimize energy management and meet the goals of the Strategic Plan. It overcomes multiple barriers through the implementation of strategies and tactics that provide an integrated solution to the customer, offer education and outreach to create awareness and promote continuous energy efficiency improvement. The program also enables a facility to attain resource management levels that exceed industry standards and gain them market and worldwide recognition.

CEI Program Offering

The Continuous Energy Improvement (CEI) program compliments the Calculated Energy Efficiency Program by helping customers implement energy efficiency measures that have been identified through energy efficiency audits or in-depth facility/process assessments. Such assessment may be jointly provided by the IOUs and the U.S. Department of Energy (DOE) or ANSI. It focuses on improving production and optimizing energy efficiency and provides integrated resource management solutions including GHG reduction. This approach overcomes such barriers as lack of awareness of energy efficiency opportunities and provides highly skilled workforce of energy efficiency, process optimization, and resource management.

Marketing and Outreach

To increase awareness of the program, a statewide centralized clearinghouse may be developed to give customers access to information on operating best practices in energy efficiency, industry relevant technical assistance, baselines, case studies, tools and computer based training. This clearinghouse addresses the issue of availability of information and qualified industry specialists to fully assess a building, system or process and help customers understand how energy efficiency can impact their emissions, resource consumption or waste discharge streams. A clearinghouse helps alleviate the problem often run into by Non-Residential customers of getting incorrect or out-of-date information from some local networks. It will also enable design engineers to specify energy efficient measures to exceed industry accepted baseline standards when constructing new or retrofitting existing buildings or systems, instead of specifying only what they know or what they are familiar with.

The Statewide Program information and services will primarily be delivered through account representatives, IOU call centers hotlines, local government partnerships, third parties, and IOU internet sites. Information may also be made available through industry events, through industry organizations, and through advertising in industry and trade publications. Other avenues to reach out to customers and identify energy efficiency opportunities include non-resource programs that provide education and outreach, workforce education and training, or through IOU Emerging Technologies Programs.

Education and Training
Highly skilled energy management professionals may conduct technical training and seminars to educate the public as well as develop a highly trained energy efficiency workforce that is accessible to industry.

Emerging Technologies
In collaboration with ET and the CEC, ET may conduct studies, pilots, and demonstrations to prove the viability of promising emerging technologies and lower the risk of investment which in turn will speed up market penetration.

Financial Assistance
Rebates and incentives properly priced and based on energy savings quantified through technical assessments or basic audits, can help customers overcome internal financial hurdle rates. Skilled energy efficiency personnel may also assist customers and provide additional information about other opportunities for project assistance, such as State or Federal funds available for energy efficiency projects, tax incentives or other local sources of project funding.

d) Quantitative Program Targets

The targets provided herein are best estimates, but nonetheless are forecasts.

Table 5

	Program Target by 2013	Program Target by 2014
Projects	10	10

e) Advancing Strategic Plan Goals and Objectives

The Agricultural Energy Efficiency Program supports all three goals in the Strategic Plan for the Agricultural Sector. General advancement of the goals is presented in the program implementation plan for the Agricultural Energy Efficiency Program. More specific support of the goals in the Agricultural Calculated Energy Efficiency Program is presented here.

Goal 1: Establish and maintain a knowledge base sufficient to support development of all available, cost-effective, reliable, and feasible energy efficiency, demand reduction (and renewable) energy resources.

The Agricultural Calculated Energy Efficiency Program supports strategies to develop a knowledge base of efficiency solutions, foster workforce education and training, and encourage applications of new technologies.

Goal 2: California regulations, financing mechanisms, and incentives programs affecting the management of energy, air and water resources, solid waste, and climate change will be coordinated to mutual advantage.

The program supports strategies to attain multi-resource management goals and to coordinate technical assistance, funding and incentive mechanisms.

Goal 3: Achieve significant increases in the efficiency of electricity and natural gas use and on-site renewable energy utilization, including setting a specific target for irrigation efficiency.

The program supports strategies to make information on efficiency solutions readily available as well as conduct marketing and outreach to stimulate efficiency actions.

6. Program Implementation

a) Statewide IOU coordination

i. Program name: Agricultural Calculated Energy Efficiency Program.

ii. Program delivery mechanisms

Agricultural Calculated Energy Efficiency Program will be coordinated on a statewide level to unify the implementation of program aspects such as program name, program delivery mechanisms, incentive levels, marketing and outreach plans, and IOU program interactions. The Agricultural Calculated Energy Efficiency Program will coordinate with the core Agricultural Energy Efficiency Program to provide mutual support.

The high-level focus of this statewide coordination effort will enable the capture of new innovations and opportunities for program improvement, correct program weaknesses that reveal themselves during implementation, and ensure achievement of statewide targets across IOU service territories. Therefore, statewide focus on program unity and continuous program improvement over the course of the implementation cycle will be enabled.

iii. Incentive levels

A broad range of measures is eligible for the Calculated Energy Savings Program, as seen in the following table. The current incentives for these measures are standard across the IOUs participating in the Statewide Agricultural Calculated Energy Efficiency Program.

Incentives will be as follows:

- Therms, $1.00/therms, Capped at 50% of project cost

The IOUs are exploring innovative means of improving the Calculated Incentive sub-program based on Energy Division and market direction. One possible method to comply with the Energy Division's guidance to "achieve deeper energy savings retrofits and packages of measures" is to institute a scaled incentive mechanism that would provide higher incentives for more comprehensive projects. SCG plans to solicit input from stakeholders for changes to the incentive structure for gas-only measures. Potential changes may include measure incentive rate changes, possible bonuses, including a comprehensiveness bonus and a small business participation bonus, and a scaled incentive mechanism.

iv. Marketing and outreach plans, e.g. research, target audience, collateral, delivery mechanisms

The Calculated Energy Efficiency Program may be marketed through IOU Account Executives, as well as through trade allies, educational, outreach and other marketing activities. Marketing activities will target business customers, ESCOs, trade associations, local business groups and government entities to generate interest and program participation. The Program may also provide direct customer contact by account executives, demand response program outreach, phone and e-mail support.

Marketing campaigns may provide a wide range of pro-active solutions targeted by segmentation research. In addition, marketing efforts may be integrated in a menu of demand response, energy efficiency and conservation programs. This menu will provide customers a full array of EE and DR options. By providing packaged energy management solutions for each industry segment, IOUs will better communicate with and serve customers.

Marketing efforts may incorporate a variety of marketing tactics/activities to promote the solutions in the program. Education, awareness and outreach efforts may use targeted multi- media communication channels. This will ensure the message reaches the intended audiences with enough frequency to create awareness, educate and engage the customer to motivate attitude and behavior changes. The marketing strategies may include, but are not limited to, a mix of print, radio, TV, direct mail, e-mail, personal contact, trade shows, trade association meetings, customer workshops and seminars. The strategy will also include energy related and other community events and partnerships with business and industry organizations, specialized collateral, case studies, website links and information with regular updates, bill inserts, press releases, and newspapers.

Market outreach to raise awareness of EE programs available may use a number of multi-media strategies, including:

- Account representatives may make a regular and consistent customer calling effort to key customers within this sector;

- IOU representatives, program management representatives, and field engineers may be available to provide additional expertise;
- Participation and membership in one or two key trade associations affiliated with each high priority sub-segment within the agricultural market sector;
- Attendance at the key trade shows for each high priority sub-segment within the agricultural market sector;
- IOU-sponsored training events at the IOU's Customer Training Centers and other convenient locations within the IOU's service territory;
- Hosting of IOU-sponsored webinars that provide sub-segment training and program adoption; and
- Written collateral pieces that provide an overview of the IOU's Energy Efficiency programs will be linked into the appropriate IOU's DSM web page.

The ideal marketing mix will be assessed for maximum awareness and participation. Marketing and outreach coordination may be coordinated, to the extent possible, among the IOUs utilizing the statewide coordination process described above. Furthermore, agricultural facilities are recognized as large energy and water consumers. IOUs will develop proposals, as appropriate, to facilitate water-energy nexus projects.

The IOUs are currently developing an in-depth segmentation of the agricultural market. The results of this customer segmentation will support the development of targeted integrated marketing and outreach plans outlining multiple delivery channels that target customers, based on their needs and preferences. Such delivery channels will likely include increased customer outreach through trade and community-based associations, third parties, government partnerships and core IOU programs.

v. IOU program interactions with CEC, ARB, Air Quality Management Districts, local government programs, other government programs as applicable

The Agricultural Calculated Energy Efficiency Program will scan the programs offered by CEC, ARB, Air Quality Management Districts, and other government agencies to capitalize on opportunities to share program information and marketing collateral with agricultural customers, to the extent possible. In the past, each government agency and IOU has operated natural resource and energy programs independently, missing opportunities to serve customers who manage more than one resource type.

Regarding water conservation, IOU program managers will partner with the local water districts to co-brand marketing collateral, attend trade shows, co-release notices, for programs with interactive water and energy effects. Similarly, with ARB and Air Quality Management Districts, IOUs will offer customers

Calculated sub-program incentives for energy efficient equipment that may also reduce water and GHG emissions.

vi. Similar IOU and POU programs

The IOUs will be delivering many third-party programs that utilize the Agricultural Calculated Energy Efficiency Program infrastructure. This will ensure a consistent delivery of measure incentives to ensure that programs do not cannibalize each other and detract from achieving cost-effective energy savings.

b) <u>Program Delivery and Coordination</u>

i. Emerging Technologies (ET) program

California's long-term energy efficiency vision can be attained through long-term and continuous development, verification, and acceptance of new technologies into the market. The achievement of long-term goals requires new technology as well as information, training and market development to maximize the energy efficiency benefits of cutting edge technologies. In recognition of the importance of emerging technologies, the Calculated sub-program will consider higher initial incentives for emerging technologies being newly introduced to the market place. Once the new products have taken hold in the market, the incentives will be adjusted to reflect market conditions. In addition, portfolio staff actively works to incorporate promising emerging technologies from the ET program.

ii. Codes and Standards program

The Calculated sub-program relies on the Codes and Standards program to help maintain an updated and relevant list of measures that will support savings. It is important to manage the measure life cycle to take full advantage of providing incentives before moving them into code. The program will coordinate with the Codes and Standards Planning & Coordination sub-program. As codes and standards impact measures, the program will act to align itself with appropriate offerings. Programs will include new offerings that will allow flexibility in adapting to changes in codes and standards, market trends, and technologies. Planned enhancements to Title 20 and 24 will be reflected in incentive levels and eligible measures and services. As the market moves toward "low energy" or "zero net energy" buildings, specific changes to each element of the bundling will be made to ensure the latest cost effective technologies/services (e.g., LEDs) are made available. These technologies will begin as R&D, transition to Emerging Technologies, then to Incubation and finally to Mainstream.

iii. WE&T efforts

Workforce Education & Training (WE&T) efforts support the education and training of a robust network of industry trade allies, vendors, engineers, design teams and others who can support the market transformation strategies of the Strategic Plan. In the Agricultural Energy Efficiency Program, WE&T efforts will focus in the near term on supporting national ANSI Energy Management Certification development efforts, as outlined in the Strategic Plan. Programs will

closely coordinate with key stakeholders to ensure that California is poised to adopt this national standard and be a leader in this effort. Specifically, prerequisite trainings will be offered in DOE systems trainings to lay the groundwork for certification level trainings. These education and training offerings take place through IOU's energy centers and technology centers.

iv. Program-specific marketing and outreach efforts

Marketing and outreach initiatives may include but not limited to

- Participation and membership in one or two key trade associations affiliated with each high priority sub-segment within the agricultural sector, as appropriate;
- Attendance at key trade shows within the agricultural sector;
- IOU-sponsored training events at the IOU's Customer Training Centers and other convenient locations within the IOU's service territory;
- Hosting of IOU-sponsored webinars that provide sub-segment training and program adoption;
- Development of case studies, web pages, and marketing material that provide an overview of the IOU's energy efficiency programs; and
- An invitation to the California Farm Bureau to collaborate ways to improve program uptake.

Integrated and program-specific marketing efforts will complement and work in coordination with SW Marketing, Education and Outreach (ME&O) Program to increase awareness, provide education, and drive ongoing engagement and participation in DSM programs and services among nonresidential customers. The statewide effort will provide the first level with IOU specific programs providing reinforcement at a local level.

v. Non-energy activities of program

The program provides a significant challenge to integrating DSM initiatives to non-energy activities due to the general industry structure, the nature of market sector resource use, limited resource savings potential specific to smaller businesses, and limited bandwidth. Therefore, integrated audits across the various energy efficiency program offerings, with complementary options available through other entities (for example, water agencies) may identify the opportunities recommended to the specific agricultural customer.

Concerning water conservation, IOU program managers will contact the local water districts to share marketing collateral, attend trade shows, and mutually release notices for programs with interactive water and energy effects. IOUs will also offer Calculated sub-program incentives to ARB and Air Quality Management District customers. These incentives include energy efficient equipment that may also reduce both water and GHG emissions.

In addition, the program will offer customers educational information about the non-energy benefits associated with energy efficiency measures, such as improved safety, indoor air quality, productivity, comfort, and appearance.

vi. Non-IOU programs

The program will continue to engage with Air Quality Management Districts, CEC, ARB, DOE, water agencies, and other government agencies responsible for regulating the various aspects and operations of customer facilities participating in the programs, as appropriate and feasible.

vii. CEC

As of June 2012, PIER no longer exists. However, the program will interact with the Emerging Technologies Program to leverage new technologies to increase the list of measures available for energy efficiency projects. The portfolio staff actively works to incorporate promising emerging technologies.

viii. CEC work on C&S

Planned enhancements to Title 20 and 24 will be reflected in incentive levels and in eligible measures and services.

ix. Non-utility market initiatives

The program will support and educate customers. It will also facilitate initiatives (for example, AB 32, renewables, ANSI certification, facility benchmarking, Continuous Energy Improvement, and California Green Building Initiative). The IOUs will remain engaged in these efforts and work to influence the development of increasingly higher standards.

c) Best Practices

The CEI program builds upon the initial feedback from the current CEI program and expands its reach into the Agricultural segment.

d) Innovation

For the 2013-2014 program cycle, California IOUs will implement an incentive structure that emphasizes advanced controls that enable demand response motivating customers to participate in energy efficiency and demand response incentive programs as well as enrollment in demand response programs.

IOUs will continue working collaboratively to modify program policies and procedures to address ongoing changes in customer expectations, market conditions and program flexibility. These changes will improve program understanding and participation, promote measures eligibility, increase customer economical benefits, and reduce policy restrictions identified as barriers to participation. IOUs are implementing such processes based on market studies and policy discussions conducted on the subject. Among modifications that would be potentially discussed and implemented are incentive caps

and redesign of early retirement measures and equipment in conformance with Commission guidelines.

IOUs are planning to elaborate and utilize positive experience obtained using the SBD Simplified tool to include energy efficiency retrofit projects. Such tools substantially reduce application processing and review time and minimize number of hand-offs without sacrificing accuracy of energy saving calculations.

IOUs will use an integrated approach to addressing DSM opportunities (for example, merging energy efficiency and demand response analysis, and converting recommendations to Calculated programs). In addition, streamlining programs through processing and reviewing energy efficiency and demand response measures in a single application, and providing analytical information about applicable distributed generation solutions, will maximize customer adoption rates for the most cost-effective energy management opportunities.

IOUs will consolidate various calculating software such as SPC Software, Engage and other measure specific calculating tools to standardize calculating methodologies. This will ensure that calculations will be more uniformed and consistent amongst all stakeholders. This will not limit the use of nationally recognized standard DOE toolsets for certain measures.

e) Integrated/Coordinated Demand Side Management

The IOU's have identified integrated Demand Side Management (IDSM) as an important priority. As a result they have proposed the establishment of a Statewide Integration Task Force (Task Force). The program plans to work closely with the Task Force to identify comprehensive integration approaches that feed into the overall statewide strategy and to implement best practices as rapidly as practical.

f) Integration across resource types (energy, water, air quality, etc)

California's agricultural sector faces a multitude of environmental and regulatory challenges that affect their survival and competitiveness. New regulations aimed at improving air quality, water quality and reducing toxic environmental pollutants are proving to be expensive and disruptive to conventional businesses, and complying with these regulations may actually cause increased energy use.

To help deal with these challenges, the program will coordinate with the regulating agencies and their programs to support common program designs, customer incentives, marketing opportunities, and implementation opportunities. IOUs will continue to offer targeted trainings to customers who share common regulatory challenges in an effort to educate customers on impending regulatory requirements for their business operation, and the most efficient solution options to consider for compliance. Future workshops may look at small and medium sized water and wastewater treatment options, steam system upgrades, and energy efficiency to meet AB32 targets.

IOUs will partner with water agencies to offer joint energy and water conservation incentives to support projects that reduce both energy and water consumption. This partnering will reduce administrative costs and increase the program's societal benefits and impacts.

The Program will integrate applicable topics such as GHG reduction and water conservation into targeted customer workshops, marketing efforts, and communications to build on efforts from the previous program cycle.

Water/Energy Nexus Strategy

SoCalGas supports improving the efficiency of water systems as one of the most critical strategies to capture water/energy nexus benefits in the energy efficiency programs. SoCalGas plans to focus its efforts in areas that use gas engines as the energy source to deliver and treat water. For water agencies within SoCalGas's territory, we plan to issue an RFP to utilize a contractor to implement leak-loss detection and remediation and pressure management services applicable to storage, pumping and distribution through SoCalGas's core or Third Party Program. SoCalGas will explore new project ideas for the water/energy nexus, as well as the calculation of ancillary water benefits (e.g. "embedded" energy savings). SoCalGas will accelerate the expansion of cost-effective water-energy nexus programs by coordinating with the other utilities, water agencies, and municipalities to study the cost effectiveness and the embedded energy savings for water/energy efforts. Our intent is to continue to offer measures and services to the water sector through the "calculated" and audit programs. SoCalGas will also explore for new direct energy measures that can be incented under the calculated program. Additionally, we will increase our efforts to capture the water-energy nexus and sustainability in the agricultural, industrial, and commercial segments.

g) Local Element (Negotiated Incentive Option)

SoCalGas will provide a local component which will include incentives for energy-efficient retrofits, systems new construction, or replacements of existing equipment at SoCalGas customer sites. Participants may be either customers or energy-efficiency service providers (EESP's) acting as project sponsors for activities at customer sites. To qualify, a project must save a minimum of 1,000,000 therms per year. Associated energy, resource such as water, sewerage and emissions, and GHG savings will be considered when evaluating a project for funding. A project may consist of a single project at a single site, or may be aggregated from multiple projects belonging to a single customer, and may include a variety of measures.

This local element is designed to serve the largest non-residential customers within the SoCalGas service territory. Non-residential customers in this group are comprised of but not limited to the following industry sub-segments: Government/Utilities, Manufacturing/Processing Industries and Institutional. Each sub-segment has distinct energy use patterns, differences in equipment and facility design, and various management structures and decision-making processes. Because each industry sub-segment is unique, this option will use a customized, customer-focused approach.

Participating customers, taking into account their individual energy and resource conservation opportunities as well as internal hurdle rates, will propose or "bid" to SoCalGas the incentive level needed to enable large EE and Resource savings projects. This ensures that this option will be adaptable to the unique needs of each market segment.

The program is designed to be flexible and cost effective: The project sponsor proposes a project and desired incentives. Incentives may cover up to 50% of the incremental project costs less any additional funding received from other sources. Measurement and verification (M&V) is required for all projects. As a performance-based incentive program, the approved M&V report will ultimately determine the energy savings for each project. The total sum of incentives paid for a project may not exceed the amount "bid" by the customer and agreed to by SoCalGas.

h) Pilots

Not applicable.

i) EM&V

The IOUs are proposing to work with the Energy Division to develop and submit a comprehensive EM&V Plan after the program implementation plans are filed. This plan will include process evaluations and other program-specific studies within the context of broader IOU and Energy Division studies. More detailed plans for process evaluation and other program-specific evaluation efforts will be developed collaboratively by the IOUs and Energy Division. Development of these plans will occur after the final program design is approved by the CPUC and, in many cases after program implementation has begun, since the plans need to be based on identified program design and implementation issues.

7. Diagram of Program

Please see the core program diagram.

8. Program Logic Model

Please see the Commercial Calculated Energy Efficiency Program logic model.

1. **Program Name:** Agricultural Deemed Energy Efficiency Program
   Program ID: **SCG**3720
   Program Type: Statewide Core Program

2. **Projected Program Budget Table**

   Table 1 – reference the core program for budget details

a) Projected Program Gross Impacts Table

Table 2 - reference the core program for savings details

b) Program Description

a) <u>Describe program</u>

The purpose of the statewide Agricultural Deemed Energy Efficiency Program is to provide services to improve the energy efficiency of agricultural facilities in California, including financial incentives based on deemed energy savings. The energy savings are deemed for installed measures. Integrated projects are encouraged to combine energy efficiency and demand response.

The Agricultural Deemed Energy Efficiency Program is part of a suite of programs within the Statewide Agricultural Energy Efficiency Program.

Key features of the program include:

- Information and technical assistance from SoCalGas on energy efficiency measures and savings potential;
- Application via mail, fax, internet and phone by customer for eligible measures;
- Reservation of financial incentives by SoCalGas, if requested by customer;
- Pre- and post-installation inspection by SoCalGas, as determined by SoCalGas based on prior participation and other factors; and
- Payment of incentives from SoCalGas.

b) <u>List measures</u>

Itemized retrofit measures have prescribed energy savings and incentive amounts. These measures are categorized under the following end uses:

- Food service
- Boilers and water heaters
- Pipe and tank insulation
- Greenhouse Curtain
- Infrared film

c) <u>List non-incentive Agricultural Energy Advisor Services</u>

The deemed sub-program is primarily an incentive program designed to achieve energy savings through measure implementation; however it does provide such non-incentive measures as technical consultation and application preparation assistance to help

customers navigate through the application process. This assistance ensures that the sub-program captures lost opportunities by not allowing projects to fall behind schedule simply because the customer does not have the resources to shepherd through the process.

5. Program Rationale and Expected Outcome

a) Quantitative Baseline and Market Transformation Information

By its nature, market transformation occurs as a result of numerous factors and programs, not single sub-programs. Therefore, all metrics are proposed at the program level. Please refer to the quantitative baseline and market transformation discussion, presented in the overall program PIP.

Table 3 – Refer to the overarching program for quantitative baseline metrics

b) Market Transformation Information

By its nature, market transformation occurs as a result of numerous factors and programs, not single sub-programs. Therefore, all metrics and goals are proposed at the program level. Please refer to the quantitative baseline and market transformation discussion, presented in the overall program PIP.

Table 4 – Refer to the overarching program for market transformation metrics

c) Program Design to Overcome Barriers

The Agricultural Deemed Energy Efficiency Program is designed overcome several barriers. The program directly addresses key market factors that lead to higher energy costs for California businesses. Providing a menu of prescribed common measures simplifies the process of reviewing project proposals and provides a "per-widget" rebate that reduces the cost of retrofitting outdated and inefficient equipment. This element makes it attractive for customers to spend money in the short run in order to achieve lower energy costs in the long run.

Using itemized energy efficiency measures is intended to overcome barriers that inhibit many agricultural customers from adopting energy efficiency alternatives. The barriers are addressed by itemizing common energy efficiency measures and rebates, stimulating the supply of high efficiency equipment and products (through higher demand), and offering rebates that help offset higher start up and down payment expenses for energy efficient retrofits.

Furthermore, to ensure equity to all business customer segments, this program will continue to offer statewide-consistent, cost-offsetting itemized rebates to help customers with the cost of installing new energy efficient equipment.

d) Quantitative Program Targets

The targets provided herein are best estimates, but nonetheless are forecasts.

Table 5

	Program Target by 2013	Program Target by 2014
Projects	25	25

e) Advancing Strategic Plan Goals and Objectives

The Statewide Agricultural Energy Efficiency Program supports all three goals in the Strategic Plan for the Agricultural Sector. General advancement of the goals is presented in the program implementation plan for the Statewide Agricultural Energy Efficiency Program.

More specific support of the goals in the Agricultural Deemed Energy Efficiency Program is presented here.

Goal 1: Establish and maintain a knowledge base sufficient to support development of all available, cost-effective, reliable, and feasible energy efficiency, demand reduction (and renewable) energy resources.

The Agricultural Deemed Energy Efficiency Program supports strategies to develop a knowledge base of efficiency solutions, foster workforce education and training, and encourage applications of new technologies.

Goal 2: California regulations, financing mechanisms, and incentives programs affecting the management of energy, air and water resources, solid waste, and climate change will be coordinated to mutual advantage.

The program supports strategies to attain multi-resource management goals and to coordinate technical assistance, funding and incentive mechanisms.

Goal 3: Achieve significant increases in the efficiency of electricity and natural gas use and on-site renewable energy utilization, including setting a specific target for irrigation efficiency.

The program supports strategies to make information on efficiency solutions readily available as well as conduct marketing and outreach to stimulate efficiency actions.

6. Program Implementation

a) Statewide IOU coordination

i. Program name: Agricultural Deemed Energy Efficiency Program

ii. Program delivery mechanisms

Agricultural Deemed Energy Efficiency Program will be coordinated on a statewide level to unify the implementation of program aspects such as program name, program delivery mechanisms, incentive levels, marketing and outreach plans, and IOU program interactions. The Agricultural Deemed Energy Efficiency

Program will coordinate with the core Agricultural Energy Efficiency Program to provide mutual support.

The high-level focus of this statewide coordination effort will enable the capture of new innovations and opportunities for program improvement, correct program weaknesses that reveal themselves during implementation, and ensure achievement of statewide targets across IOU service territories. Therefore, statewide focus on program unity and continuous program improvement over the course of the three year implementation cycle will be enabled.

iii. Incentive levels

Incentive levels are based on measure type and will be set at uniform amounts across the state. Higher incentive levels will be provided for Emerging Technologies to spur traction in the market as feasible. The scale of increased incentive for emerging technologies will be evaluated on a measure by measure basis dependent on kW, kWh, therms, equipment cost, other market factors and cost effectiveness.

iv. Marketing and outreach plans, e.g. research, target audience, collateral, delivery mechanisms

The Agricultural Deemed Energy Efficiency Program will be marketed through IOUs account executives, as well as through trade allies, educational, outreach and other marketing activities. Marketing activities will target agricultural customers, ESCOs, trade associations, local business groups and government entities to generate interest and program participation. In addition, direct customer contact by account executives, phone and e-mail support will be provided.

Marketing efforts will incorporate a variety of marketing tactics/activities to promote the solutions in the program. Education, awareness and outreach efforts will rely on a combination of targeted multi-media communication channels and targeted communication channels to ensure the messages reach the intended audiences with enough frequency to create awareness, educate and motivate attitude and behavior changes. The marketing strategies may include, but are not limited to, a mix of print, radio, TV, direct mail, e-mail, personal contact, trade shows, trade association meetings, customer workshops and seminars, energy related and other community events and partnerships with business and industry organizations, specialized collateral, case studies, website links and information with regular updates, bill inserts, press releases, and newspapers.

Market outreach to raise awareness of energy efficiency programs available will use a number of strategies, including:

- Account representatives will make a regular and consistent customer calling effort to key customers within this sector;
- IOU representatives, program management representatives, and field engineers will be available to provide additional expertise;

- Participation and membership in key trade associations affiliated with each high priority sub-segment within the agricultural market sector;
- Attendance at the key trade shows for each high priority sub-segment within the agricultural market sector;
- IOU-sponsored training events at the IOU's customer training centers and other convenient locations within the IOU's service territory;
- Hosting of IOU-sponsored webinars that provide sub-segment training and program adoption; and
- Written collateral pieces that provide an overview of the IOU's Energy Efficiency programs will be linked into the appropriate IOU's DSM web page.

The ideal marketing mix will be assessed for maximum awareness and participation. Marketing and outreach coordination will be coordinated, to the extent possible, among the IOUs utilizing the statewide coordination process described above.

The IOUs are currently developing an in-depth segmentation of the agricultural market. The results of this customer segmentation will support the development of targeted integrated marketing and outreach plans outlining multiple delivery channels that target customers, based on their needs and preferences. Such delivery channels will likely include increased customer outreach through trade and community-based associations, third parties, government partnerships and core IOU programs.

v. IOU program interactions with CEC, ARB, Air Quality Management Districts, local government programs, other government programs as applicable

The Agricultural Deemed Energy Efficiency Program will scan the programs offered by CEC, ARB, Air Quality Management Districts, and other government agencies to capitalize on opportunities to share program information and marketing collateral with agricultural customers, to the extent possible. Conventionally, each government agency and IOU has operated natural resource and energy programs independently, missing opportunities to serve customers who must manage more than one resource type.

With respect to water conservation, IOU program managers will partner with the local water districts to co-brand marketing collateral, attend trade shows, co-release notices, for programs with interactive water and energy effects. Similarly, with ARB and Air Quality Management Districts, IOUs will offer customers program incentives for energy efficient equipment that may also reduce air and greenhouse gas emissions.

vi. Similar IOU and POU programs

The IOUs will be delivering many third-party programs that are permitted to use the Agricultural Deemed Energy Savings Program infrastructure. This will

ensure a consistent delivery of measure incentives to ensure that programs do not cannibalize each other and detract from achieving cost-effective energy savings.

b) Program Delivery and Coordination

i. Emerging Technologies (ET) program

The long-term energy efficiency vision of California may be attained through the long-term and continuous development, verification, and acceptance of new technologies into the market. The achievement of long-term goals requires new technology as well as information, training and market development to maximize the EE benefits of cutting edge technologies. In recognition of the importance of emerging technologies, the program is poised to adopt the efficiency potential of new technologies through its programs. In addition, portfolio staff actively works to incorporate promising emerging technologies.

ii. Codes and Standards program

The program relies on the Codes and Standards program to help maintain an updated and relevant list of measures that will support savings. As codes and standards impact measures, the program will act to align itself with appropriate offerings. It is important to manage the measure life cycle to take full advantage of providing incentives before moving them into code. The program will coordinate with the Codes and Standards Planning & Coordination sub-program. Programs will include new offerings that will allow flexibility in adapting to changes in codes and standards, market trends, and technologies. Planned enhancements to Title 20 and 24 will be reflected in incentive levels and eligible measures and services. As the market moves toward "low energy" or "zero net energy" buildings, specific changes to each element of the bundling will ensure the latest cost effective technologies/services (e.g., LEDs) are available. These technologies will begin as R&D, transition to Emerging Technologies, then to Incubation and finally to Mainstream.

iii. WE&T efforts

Workforce Education & Training efforts support the education and training of a robust network of industry trade allies, vendors, engineers, design teams and others who can support the market transformation strategies of the Strategic Plan. In the near term, WE&T efforts will focus on supporting national ANSI Energy Management Certification development efforts, as outlined in the Strategic Plan. Programs will closely coordinate with key stakeholders to ensure that California is poised to adopt this national standard and be a leader in this effort. Specifically, prerequisite trainings will be offered in DOE systems training to lay the groundwork for certification level trainings. These education and training offerings take place through IOU's energy centers and technology centers.

iv. Program-specific marketing and outreach efforts

Marketing and outreach initiatives will include:

- Non-contracted vendors are a key delivery channel of the Deemed sub-program. Emphasis will be placed on building awareness with more

vendors in the territory. Training vendors how to participate effectively in the program will also be a focus in the new program cycle.

- Community Based Organizations (CBOs), Faith Based Organizations (FBOs), Non-Profit organizations, and Non-Government Organizations (NGOs) with unique access and following are expected to be emphasized as a delivery channel.
- Trade associations and industry networks.
- Enabling partners (financial institutions, trade associations, service providers, law firms, environmental organizations, etc.).
- Unique channels that offer complementary value propositions from the customers' perspective (for example, energy, water, materials management, recyclables, and corporate social responsibility).
- IOU-sponsored training events at the IOU's Customer Training Centers and other convenient locations within the IOU's service territory.
- Hosting of IOU-sponsored webinars that provide sub-segment training and program adoption.
- Development of case studies, web pages, and marketing material that provide an overview of the IOU's energy efficiency programs.

Integrated and program-specific marketing efforts will complement and work in coordination with SW Marketing, Education and Outreach (ME&O) Program to increase awareness, provide education, and drive ongoing engagement and participation in DSM programs and services among nonresidential customers. The statewide effort will provide the first level with IOU specific programs providing reinforcement at a local level.

v. Non-energy activities of program

The program will offer customers educational information about the non-energy benefits associated with energy efficiency measures, such as improved safety, indoor air quality, productivity, comfort, and appearance.

vi. Non-IOU programs

The program will continue to engage with Air Quality Management Districts, CEC, ARB, DOE, water agencies, and other government agencies responsible for regulating the various aspects and operations of customer facilities participating in the programs, as appropriate and feasible..

vii. CEC

Not applicable.As of June 2012, PIER no longer exists. However, the Program will interact with the Emerging Technologies Program to leverage new technologies to increase the list of measures available for energy efficiency projects. The portfolio staff actively works to incorporate promising emerging technologies and project in coordination with the applied research of CEC.

viii. CEC work on C&S

Planned Title 20 and 24 enhancements will be reflected in incentive levels and in eligible measures and services.

ix. Non-utility market initiatives

The program will educate and support customers, and/or facilitate such initiatives as AB 32, renewables, ANSI certification, facility benchmarking, Continuous Energy Improvement, California Green Building Initiative, and other initiatives as directed. The IOUs will remain engaged in these efforts and work to influence the development of increasingly higher standards.

c) Best Practices

To maximize program effectiveness, best practices in program design and implementation will be employed and shared amongst IOUs.

Best practices in Program Design:

- Regular communication among IOUs.
- Identify qualifying products simply and effectively (Examples; ENERGY STAR®, CEE, FSTC website).
- Seek input from industry in the development of new programs. The IOU programs are trying to change how an industry operates from manufacturer design to the customers' purchasing and maintenance practices.
- Industry participation increases program volume and speeds market transformation.

Best practices in Program Implementation:

- Strive to simplify messaging and participation for the customer. (Look for the ENERGY STAR® label, purchase from a qualifying products list, etc.)
- Understand the key motivators that drive an industry and use that information to market the program. Make certain outreach efforts make the program visible to customers and the market catering to customers.
- Always communicate program marketing and advertising plans in advance to appropriate industry channels. Advanced notice allows industry partners an opportunity to leverage off of IOU marketing efforts and reinforce the program messaging.

d) Innovation

Innovative aspects of the program include improving major program performance indicators (for example, increasing the accuracy of energy saving calculations, higher realization rates, overcoming energy efficiency barriers, reducing application processing times and administrative costs, and integrated energy management).

For the new program cycle, California IOUs have implemented a new incentive structure that emphasizes peak demand reduction, addresses current economic downturn and better motivates customers to participate in energy efficiency incentive programs. During the 2013-2014 program cycle, the new incentive structure will be periodically evaluated and necessary changes may be made in order to enhance program benefits and performance,

including measure bundling incentives. The IOU's will explore offering an audit to customers considering three or more measures in an effort to determine if the audit itself leads to implementation of deeper savings.

IOUs will continue working collaboratively on modifications to program policies and procedures to address ongoing changes in customer expectations, market conditions and program flexibility. These modifications include changes that have been and will be targeting ease of program understanding and participation, measures eligibility, increase of customer economical benefits and policy restrictions identified as barriers to participation. IOUs are implementing such processes based on market studies conducted on the subject and after discussion of the policy change. Among potential modifications are incentive caps, and redesign of early retirement measures and equipment.

Where possible, IOUs will use an integrated approach to addressing DSM opportunities. These approaches include merging energy efficiency and demand response analysis and converting recommendations to Calculated program projects. In addition, streamlining programs through processing and reviewing energy efficiency and demand response measures in a single application, providing analytical information about applicable distributed generation solutions will maximize customer adoption rates for most cost-effective energy management opportunities.

e) Integrated/Coordinated Demand Side Management

The program will integrate the portfolio of IOU offerings to include energy efficiency, demand response and distributed generation and other resources, such as air and water as they connect to energy. This supports not only cost effectiveness of the portfolio and the CA Loading order, but also customer requirements. It also advances significantly the Strategic Plan's goals. On a broader scale, IDSM also includes the integration of third party programs and Local Government Partnerships (LGP) delivery channel with the statewide agricultural program.

f) Integration Across Resource Types (energy, water, air quality, etc.)

California's agricultural sector faces a multitude of environmental and regulatory challenges that threaten its survival and competitiveness. New regulations aimed at improving air quality, water quality and reducing toxic environmental pollutants are proving to be expensive and disruptive to business as usual. Both these are impacting energy use and compliance.

To help deal with these challenges, the agricultural program will coordinate with the regulating agencies and their programs to support mutually advantageous program designs, customer incentives, marketing opportunities, and implementation opportunities. IOUs will continue to offer targeted trainings to customers who share common regulatory challenges to educate customers on impending regulatory requirements for their business operations, and the most efficient solution options for their compliance. Future workshops may look at small- and-medium sized water and wastewater treatment options, steam system upgrades, and energy efficiency to meet AB32 targets.

IOUs will pursue opportunities to partner with water agencies to offer joint energy and water conservation incentives to support projects that would reduce both resources. Partnering with other IOUs will help reduce administrative cost and has a greater impact on societal benefits.

The Program will integrate applicable topics (for example, GHG reduction and water conservation) into targeted customer workshops, and marketing communications, based on work done in the earlier program cycle.

g) Pilots

Not applicable.

h) EM&V

The IOUs are proposing to work with the Energy Division to develop and submit a comprehensive EM&V Plan after the program implementation plans are filed. This plan will include process evaluations and other program-specific studies within the context of broader IOU and Energy Division studies. More detailed plans for process evaluation and other program-specific evaluation efforts will be developed collaboratively by the IOUs and Energy Division. Development of these plans will occur after the final program design is approved by the CPUC and, in many cases after program implementation has begun, since the plans need to be based on identified program design and implementation issues.

7. Diagram of Program

Please see the core program diagram.

8. Program Logic Model

Please see the Commercial Deemed Energy Efficiency Program logic model.

1. **Program Name:** Agricultural Continuous Energy Improvement Program
   Program ID: SCG3718
   Program Type: Core

2. **Projected Program Budget Table**

   Table 1 – reference the overarching program for budget details

3. **Projected Program Gross Impacts Table**

   Table 2 - reference the overarching program for savings details

4. **Program Description**

   a) **<u>Describe program</u>**

   The purpose of the Statewide Agricultural Continuous Energy Improvement (CEI) Program is to help agricultural customers engage in long-term, strategic energy planning. Target agricultural customers will be identified and approached selectively.

   The program features:

   - Management assessment of energy priorities;
   - Integrated comprehensive energy audits with recommendations on energy efficiency, demand response, and self-generation;
   - Benchmarking of energy usage and other resources;
   - Development of a strategic plan with actions for implementation;
   - Implementation including incentives from each IOU; and
   - Evaluation of performance leading to modifications for continuous improvement

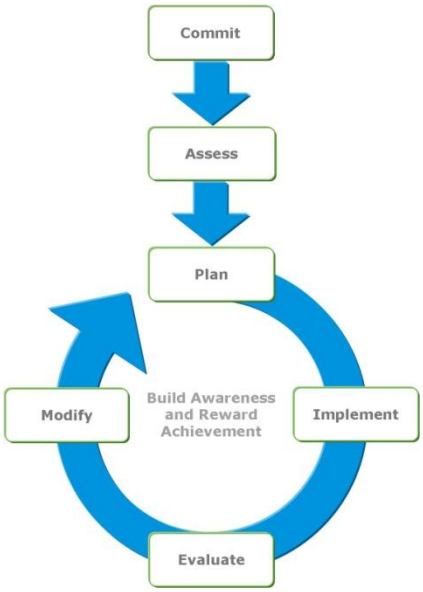
   The CEI Program is part of a suite of programs within the Statewide Agricultural Energy Efficiency Program. The CEI will be designed to complement statewide agricultural energy audit and incentive programs, namely:

   - Statewide Agricultural Energy Efficiency Program;
   - Agricultural Deemed Energy Efficiency Program;
   - Agricultural Calculated Energy Efficiency Program; and
   - Agricultural Energy Advisor.

   The audit and planning services of the IOUs will be provided at no charge to the participating customer. Costs for capital investments by the customer will be shared by the participating IOUs to the extent they are tied to measures installed under the agricultural programs.

   The program seeks to help transform energy markets and reduce energy intensity. The program represents a comprehensive approach that addresses both technical and management opportunities. Background information on continuous improvement and details on implementation are provided below.

A CEI approach applies the six principals of well-known business continuous improvement programs, such as Six Sigma and International Standards Organization (ISO) standards, to facility and plant energy management: Commit, Assess, Plan, Implement, Evaluate, and Modify.



At each stage of customer engagement, there are a variety of IOU and non-IOU products and services that can be offered to fit different customer profiles and optimize the cost effectiveness of each IOU's portfolios.

In implementation, participating IOUs will screen customers for certain CEI services based on factors such as customer energy use, complexity, number of facilities, energy decision making structure, environmental commitment or demonstrated motivation to take action. Screening criteria and specific product offerings will be IOU-specific.

In 2013-2014, CEI will be expanded to include select group of mid-sized nonresidential customers. Available options to help target these customers may include an individualized, a small group, or a mass-market, remote deployment approach.

CEI will coordinate its services with the Agricultural Energy Advisor sub-program offerings. CEI offers customers what can be considered the pinnacle of audit offerings guiding senior management to instill energy considerations in all management/business operational decisions and in long-term energy planning.

CEI Commitment

CEI begins with a high level management commitment by the customer to improving energy performance, combined with other environmental and regulatory commitments being developed by energy users in response to market and political pressures. A corporate commitment sends the top-down message to employees, partners, shareholders and vendors that energy is a priority issue requiring attention. The message also paves

the way for establishing the company resources required to implement the steps of CEI. These resources can include capital, personnel, i.e., energy champions or teams, or technical systems and software required for energy management.

Gaining true customer commitment can take time, but is critical. In implementation, IOUs will formalize the Commitment phase with more intensive customers through a CEI participation agreement, which outlines the IOU CEI services being offered as well as minimum customer expectations.

CEI Assessment

After the CEI Commitment, a comprehensive assessment identifies not only technical opportunities, but also systemic energy management practices and cultural shifts. This can improve overall facility management practices and sustain continuous improvements towards long-term company targets. A component to the assessment will also include tools to help identify Energy Efficiency (EE), Distributed Generation (DG), and Demand Response (DR) opportunities.

There are many tools and resources, both IOU and non-IOU, free and licensed, available to support comprehensive customer energy assessment. They include ENERGY STAR®'s *Guidelines for Energy Management*, customer energy management assessment software products like those developed by Envinta, benchmarking tools, Integrated Comprehensive Energy Audits through the Agricultural Energy Advisor sub-program, or local and statewide third parties who can offer specialized technical expertise and assessment.

Based on screening criteria, IOUs will offer comprehensive energy assessment services utilizing, but not limited to, vetted sources like those described below, to develop a customer specific strategic energy plan.

ENERGY STAR®'s Guidelines for Energy Management

ENERGY STAR®'s Guidelines for Energy Management is housed on the ENERGY STAR® website and provides step by step guidelines to customers to support CEI, and also guides customers to ENERGY STAR®'s numerous assessment tools. This option is a low cost resource for smaller and medium customers interested in CEI, with details available at http://www.energystar.gov/index.cfm?c=guidelines.guidelines_index.

Energy Management Assessment Tools

Envinta One-To-Five, Achiever, Challenger: A professionally facilitated energy management assessment with company decision makers. The assessment explores management practices and company priorities to develop a CEI roadmap for energy goals and actions. Available tools are:

- Each IOU's website tools
- EPA website tools
- DOE website tools.

Integrated Comprehensive Energy Audits

Integrated Comprehensive Energy Audits provide an inventory of technical facility end-uses and energy efficiency, demand response and self-generation investment opportunities. For a full description, see the Agricultural Energy Advisor sub-program plan.

Benchmarking

Benchmarking can measure energy performance of a company, building, process, or piece of equipment to industry standards or comparable groupings. Benchmarking is a natural first step for the CEI process. Customers with multiple facilities find benchmarking useful to prioritize efficiency projects, track progress toward energy or green house gas improvement goals, or drive competition among similar benchmarked facilities. Units of measurement vary widely. For commercial buildings, the unit is energy used/square foot for a unit of time. For agriculture or agricultural facilities, however, benchmarking utilizes energy/unit of production for a unit of time.

Benchmarking can also be applied to other resources and environmental issues, such as water use and CO2 emissions.

The statewide IOUs can currently utilize a variety of benchmarking tools and resources including those developed by the EPA for ENERGY STAR and by Lawrence Berkeley National Lab with CEC funding:

- ENERGY STAR® Portfolio Manager Commercial Benchmarking: Benchmarks customer facility against a national database of similar NAICS codes for an ENERGY STAR® score (0-100), kBTU/sq ft-yr, lbs CO2/yr;
- ENERGY STAR® Cement Plant Energy Performance Indicator;
- ENERGY STAR® Auto Assembly Plant Energy Performance Indicator; and
- LBNL BEST Winery: Benchmarks a winery's energy and water use against a theoretical best practice winery and allows user to model efficiency improvements.

Other benchmarking tools are under development including:

- ENERGY STAR® Food Processing Energy Performance Indicator;
- ENERGY STAR® Glass Manufacturing Energy Performance Indicator;
- ENERGY STAR® Pharmaceutical Manufacturing Energy Performance Indicator;
- LBNL BEST Dairy Processing: Benchmarks a dairy processors energy and water use against a theoretical best practice facility allows modeling of improvements;
- Management Standard for Energy SME 2000-2008;
- DOE sponsored ISO Plant Certification; and
- LBNL Superior Energy Performance.

In implementation, the statewide agricultural program teams will continue to partner with energy industry peers, industry associations and DOE/Commission sponsored labs and consultants, to enhance the use of existing tools, and develop new tools for key California industries. Benchmarking will be coordinated with the Agricultural Energy Advisor sub-program.

CEI Planning
Strategic energy planning involves setting energy goals and action plans around energy efficiency, demand response, and generation as appropriate. Planning for customers will typically involve Account Representatives and/or consultants. As is discussed in the Strategic Plan and in the PIP Integration Section, strategic planning can also include complementary non-energy considerations as well, such as greenhouse gas reductions, water efficiency, and waste-stream minimization, all which have embedded energy components.

Data and findings from a comprehensive customer assessment are critical in developing any comprehensive energy plan, including the results from technical audits or assessments, facility benchmarks, energy management assessments, and assessments of company priorities. This information is analyzed and used to develop realistic and achievable company goals and prioritized shorter-term tactics needed to achieve them. Energy plans should be living documents revisited and revised regularly.

Energy goals can vary widely and include elements such as resource utilization ("Company X will reduce it's overall energy intensity by 3% over the 2013-2014 program cycle"), carbon reduction goals ("Company X will be carbon neutral by 2014"), or management oriented goals ("Company X will implement energy teams by 2013"). Goals can be internal documents or can be made public through press releases as part of larger sustainability plans, which is increasingly important for large and public companies.

CEI will assist customers in developing and implementing action plans to execute the prioritized near-term activities in support of their company's energy goals, as well as assistance with planning for the resources, staff and schedule for tracking. Action plans typically include activities such as prioritizing process systems or facilities based on benchmarking or company drivers, identifying internal resources required to implement plans, develop project justification and incentive application documentation lists and detailed schedules.

CEI Implementation
In the implementation stage, IOUs partner with customers to identify technical support and IOU and non-IOU resources available to support implementation of projects, such as rebates, incentives, third party and government partnership programs, and state and national resources, including:

- Statewide Deemed rebates;
- Statewide Calculated incentives for new construction/tenant improvement, and retrofit ;
- Third Party and Government Partnership programs (described in the statewide and local third party filings);
- IOU and non-IOU financing options and owners engineer support; and
- External and internal engineer support.

CEI Evaluation and Modification

In any continuous improvement program, evaluation is an ongoing process of evaluating actual performance against company goals, targets and action plans. It may include repeating the benchmarking and system or facility baseline process annually, assessing advancements in organizational and management practices that facilitate energy management improvements, or evaluating cost savings per unit of product. Regular evaluation will inform changes to goals and action plans moving forward.

CEI will be available to all Non-Residential customers meeting certain eligibility criteria to justify the cost of the offering. Criteria will include but not be limited to customer energy use, complexity, number of facilities, energy decision making structure, environmental commitment and demonstrated motivation. Marketing and outreach plans include training of the IOU in-house staff and customer groups. Collateral materials such as fact sheets, how-to documents, and Power Point slides will be produced and distributed during sales calls, public events or trade shows.

b) List measures

Integrated energy audits under the CEI program will include the full range of applicable end-uses and measures for those end-uses. This will include process changes. The energy audit provides a tool that will lead customers to the measures and incentives offered in the other agricultural programs. However, depending on the outcome of the 2012 process evaluation, customer incentives may be offered.

c) List non-incentive Agricultural Energy Advisor

Activities conducted under the CEI Program are non-resource activities with no associated incentives. These activities include: marketing and outreach, savings calculation assistance, retrofit project scoping, technical assistance, and incentive application assistance.

5. Program Rationale and Expected Outcome

a) Quantitative Baseline and Market Transformation Information

By its nature, market transformation occurs as a result of numerous factors and programs, not single sub-programs. Therefore, all metrics are proposed at the program level. Please refer to the quantitative baseline and market transformation discussion, presented in the overall program PIP.

Table 3 – Refer to the overarching program for quantitative baseline metrics

b) Market Transformation Information

By its nature, market transformation occurs as a result of numerous factors and programs, not single sub-programs. Therefore, all metrics and goals are proposed at the program level. Please refer to the quantitative baseline and market transformation discussion, presented in the overall program PIP.

Table 4 – Refer to the overarching program for market transformation metrics

c) Program Design to Overcome Barriers

CEI is intended to address several market barriers that prevent wider adoption of energy efficiency practices. These barriers include:

- Lack of information – The CEI evaluation and modification process provides data that customers can use to reevaluate their commitment and/or modify their energy goals.
- Performance uncertainties – Through CEI's comprehensive baselining and benchmarking assistance, customers will have access to real-time data that demonstrates how their facility is performing relative to their established goals.
- Organizational customs – The high-level customer commitment that is at the core of CEI increases the likelihood that corporate cultures that prevent successful implementation of comprehensive energy policies will be changed.

d) Quantitative Program Targets

The targets provided herein are best estimates, but nonetheless are forecasts.

Table 5

	Program Target by 2013	Program Target by 2014
Numnber of Engagements	1	1

e) Advancing Strategic Plan Goals and Objectives

The Agricultural Energy Efficiency Program supports all three goals in the Strategic Plan for the Agricultural Sector. General advancement of the goals is presented in the program implementation plan for the Agricultural Energy Efficiency Program. More specific support of the goals in the Agricultural Deemed Energy Efficiency Program is presented here.

Goal 1: Establish and maintain a knowledge base sufficient to support development of all available, cost-effective, reliable, and feasible energy efficiency, demand reduction (and renewable) energy resources.

The Agricultural CEI Program supports strategies to develop a knowledge base of efficiency solutions, foster workforce education and training, and encourage applications of new technologies.

Goal 2: California regulations, financing mechanisms, and incentives programs affecting the management of energy, air and water resources, solid waste, and climate change will be coordinated to mutual advantage.

The program supports strategies to attain multi-resource management goals and to coordinate technical assistance, funding and incentive mechanisms.

Goal 3: Achieve significant increases in the efficiency of electricity and natural gas use and on-site renewable energy utilization, including setting a specific target for irrigation efficiency.

The program supports strategies to make information on efficiency solutions readily available as well as conduct marketing and outreach to stimulate efficiency actions.

6. Program Implementation

a) Statewide IOU coordination

i. Program name: Agricultural Continuous Energy Improvement Program

ii. Program delivery mechanisms

The Agricultural CEI Program will be coordinated by participating IOUs on a statewide level to unify the implementation of program aspects such as program name, program delivery mechanisms, marketing and outreach plans, and IOU program interactions. The Agricultural CEI Program will coordinate with the core Agricultural Energy Efficiency Program to provide mutual support.

The high-level focus of this statewide coordination effort will enable the capture of new innovations and opportunities for program improvement, correct program weaknesses that reveal themselves during implementation, and ensure achievement of statewide targets across IOU service territories. Therefore, statewide focus on program unity and continuous program improvement over the course of the two-year implementation cycle will be assured.

iii. Incentive levels

Not applicable.

iv. Marketing and outreach plans, e.g. research, target audience, collateral, delivery mechanisms

As with other information and education programs, CEI will be primarily delivered by IOU customer energy efficiency staff and contractors, service and sales representatives, website and marketing and outreach efforts. Other channels of delivery may be developed.

The IOUs are currently developing an in-depth segmentation of the agricultural market. The results of this customer segmentation will support the development of targeted integrated marketing and outreach plans outlining multiple delivery channels that target customers, based on their needs and preferences. Such delivery channels will likely include increased customer outreach through trade and community-based associations, third parties, government partnerships and core IOU programs.

v. IOU program interactions with CEC, ARB, Air Quality Management Districts, local government programs, other government programs as applicable

The program will scan the programs offered by CEC, ARB, Air Quality Management Districts, and other government agencies to capitalize on opportunities to share program information and marketing collateral with agricultural customers.

vi. Similar IOU and POU programs

Over the next two years, the IOUs will seek to increase their interactions with the POUs, as applicable, to promote the CEI concept throughout the state. This may involve the creation of periodic California energy efficiency program summits that seek to increase awareness of the STRATEGIC PLAN and how programs could/should be designed to help meet its aggressive targets.

b) <u>Program Delivery and Coordination</u>

i. Emerging Technologies (ET) Program

The audit program management team will stay abreast of and incorporate relevant emerging technologies into audit recommendations. In addition, IOU field engineers, who deliver IEAs, are active contributors to the Emerging Technology process by their participation in ET Roundtable/Information meetings and continually seek to offer new technologies to customers.

ii. Codes and Standards Program

CEI implementation will include information about pending new codes and standards that may affect planning or prioritization of retrofit or new construction projects.

iii. WE&T efforts

CEI implementation will integrate with WE&T efforts by providing CEI process, lessons learned, and case study input to energy engineering curriculum designers for community colleges and universities. This activity will be coordinated through the Statewide WE&T program team and will ultimately be integrated into the web portal that team is now developing. IOUs will assess and support specialized WE&T training to help target working energy management professionals, industry professionals, and those pursuing education in universities and colleges.

IOUs will also continue with WE&T coordination to bridge the linkages and integrate sector strategy approaches. Program costs will be shared with WE&T.

iv. Program-specific marketing and outreach efforts

A broad range of marketing activities will be used to promote audits and elevate customer engagement. The Agricultural CEI program will be promoted via direct communication between customers and Account Executives with support of

Project Managers from individual programs, as well as through traditional advertising activities, such as internet, bill inserts, brochures, trade shows, etc. Marketing activities will be coordinated between IOUs, Demand Response and Distributed Generation departments within each IOU.

Integrated and program-specific marketing efforts will complement and work in coordination with SW Marketing, Education and Outreach (ME&O) Program to increase awareness, provide education, and drive ongoing engagement and participation in DSM programs and services among nonresidential customers. The statewide effort will provide the first level with IOU specific programs providing reinforcement at a local level.

v. Non-energy activities of program

Integrated Comprehensive Energy Audits are a key tool for identifying non-energy opportunities for specific customers. The energy audits can identify non-energy benefits associated with recommended measures, such as improved safety, productivity, indoor air quality, comfort and appearance.

vi. Non-IOU programs

The program will continue to engage with Air Quality Management Districts, CEC, CARB, DOE, water agencies, and other government agencies responsible for regulating the various aspects and operations of customer facilities participating in the programs.

vii. CEC

As of June 2012, PIER no longer exists. However, the Program will interact with the Emerging Technologies Program to leverage new technologies to increase the list of measures available for energy efficiency projects. The portfolio staff actively works to incorporate promising emerging technologies and project in coordination with the applied research of CEC.

viii. CEC work on C&S

The program will not be implemented with a direct linkage to codes and standards efforts

ix. Non-utility market initiatives

Education about federal tax incentives for energy efficiency investments is an example of non-IOU information and guidance that CEI will provide customers. In addition, the IOUs will participate in national efforts to develop and/or improve benchmarking tools and services that can be used by customers to better facilitate their adoption of sustainable energy management practices.

c) <u>Best Practices</u>

A CEI approach applies the principals of well-known business continuous improvement programs, such as Six Sigma and International Standards Organization (ISO) standards,

to facility and plant energy management: Commit, Assess, Plan, Implement, Evaluate, and Modify.

d) Innovation

The program seeks to help transform energy markets and reduce energy intensity. The program represents a comprehensive approach that addresses both technical and management opportunities.

Depending on the outcome of the 2012 process evaluation, CEI may consider customer incentives to accelerate project implementation (including IDSM projects), and reward customer for implementing strategic energy management.

e) Integrated/Coordinated Demand Side Management

CEI includes project analysis and implementation support of recommendations of Integrated Comprehensive Energy Audits, which provide customers with an inventory of facility end-use breakdown and energy efficiency, demand response and self-generation investment opportunities. Over the last few years, traditional DSM programs have learned that successful customer participation in one program leads to a likelihood of repeat participation in the same program. Additionally, this successful participation makes these customers likely candidates for other, similar programs, but because of siloing – thinking of programs as separate, unrelated efforts – this has proved difficult. To overcome this, the CEI sub-program will leverage lessons learned from IDSM efforts by offering comprehensive, coordinated marketing and program delivery.

A primary issue when integrating energy efficiency and demand response programs is that the two programs are at financial odds with one another, as both programs often reduce the potential for each other's financial incentives. For example, energy efficiency may reduce the overall baseline by which the demand response program's incentives are based upon. Since benefits from long-term energy savings derived from technological measures outweigh the temporary demand reduction benefits derived from behavioral actions, the CEI sub-program will offer additional support and services for energy efficiency measures that enable demand response when customers enroll, or are already enrolled, in demand response programs. In so doing, the program seeks to maximize the potential for both types of programs.

A secondary issue when integrating energy efficiency and demand response programs is that communications of both types of DSM program are often non-coordinated, since energy efficiency is typically technology based and demand response is often focused on behavior. Also, demand response efforts often happen prior to the summer "event season" and wane throughout the remainder of the year. To overcome these differences, the Program will offer integrated and coordinated year-round marketing through consolidates applications, collateral, web sites, and events, where applicable.

Through bundling program elements and offering one program application, customers will have the opportunity to enroll in demand response programs in addition to energy efficiency programs.

To support the integration of energy efficiency and demand response programs, the sub-program will focus on several tactics:

- Promotion and incentives for demand response in such a way as to stimulate energy efficiency first;
- Integrated and coordinated year-round marketing (e.g. applications, collateral, web sites, and events);
- Linking of program eligibility requirements (e.g. customer size);
- Provide unified technical assistance through enhanced EE/DR Audits through the TA Program to allow for cross-harvesting opportunities;
- Integrated presence on IOU websites; and
- Regular coordination meetings between energy efficiency and demand response program management

CEI is recognized as a strategy to advance the statewide IDSM program's goals and objectives. The IOUs will increase IDSM messaging and coordination within CEI.

f) Integration Across Resource Types (energy, water, air quality, etc)

CEI implementation will include information on non-IOU Programs to expose customers to available funding, such as from air or water agencies to support efforts. IOU CEI sub-program managers will partner, as appropriate, with CEC, ARB, Air Quality Management Districts, and other government agencies to capitalize on opportunities to share program information, marketing collateral and financial incentive analysis with customers. Conventionally, each government agency and IOU has operated natural resource and energy programs independently, missing opportunities to serve customers who must manage more than one resource type. For customers who are regulated by or interested in more than one resource issue, CEI will inform the customer about the mutual benefit of combining complementary resource programs.

To promote the CEI, IOUs will seek out customers interested in complementary resource programs such as provided by water and air quality agencies. Concerning water conservation, IOU program managers will partner with the local water districts to produce co-branded marketing collateral, attend trade shows, and co-release notices for programs with interactive water and energy effects.

g) Pilots

Not applicable.

h) EM&V

The IOUs are proposing to work with the Energy Division to develop and submit a comprehensive EM&V plan after the program implementation plans are filed. This may include process evaluations and other program-specific studies within the context of broader IOU and Energy Division studies.

More detailed plans for process evaluation and other program-specific evaluation efforts cannot be developed until after the final program design is approved by the CPUC and in

many cases after program implementation has begun, since plans need to be based on identified program design and implementation issues.

Once results of the 2010-2012 evaluations are ready, recommendations will be reviewed for modifying the CEI PIP accordingly.

7. **Diagram of Program**
   Please see the core program diagram.

8. **Program Logic Model**
   Please see the Commercial Continuous Energy Improvement program logic model.